

Attachment 1c

**REMEDIAL INVESTIGATION
McKESSON CORPORATION PROPERTY
9005 SORENSEN AVENUE
SANTA FE SPRINGS, CALIFORNIA**

HLA Project No. 11136-163

Prepared for

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VOLUME III

APPENDICES

- I ANALYTICAL RESULTS - AIR**
- J PHYSICAL PROPERTIES TEST RESULTS - SOIL**
- K ANALYTICAL RESULTS - SOIL**

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EXECUTIVE SUMMARY

This report presents the results of Harding Lawson Associates' (HLA) Remedial Investigation (RI) conducted at McKesson Corporation's (McKesson) former chemical facility located at 9005 Sorensen Avenue, Santa Fe Springs, California. HLA conducted this work on behalf of McKesson in accordance with Consent Order 89/90-007, issued by the California Department of Health Services (DHS), now the California Environmental Protection Agency - Department of Toxic Substances Control (DTSC). HLA's work was conducted in compliance with the DTSC guidelines and the U.S. Environmental Protection Agency's (EPA), October 1988, "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA." Methods implemented during the RI are described in HLA's workplan entitled "Workplan (Revision 3), Remedial Investigation and Feasibility Study, McKesson Corporation Property, 9005 Sorensen Avenue, Santa Fe Springs, California," (Workplan), dated April 25, 1991.

The facility is located at 9005 Sorensen Avenue, in the City of Santa Fe Springs, Los Angeles County, California. The site is fenced; occupies approximately 4.3 acres in an industrialized area; and is bounded on the east by Sorensen Avenue, on the south by Fontaine Trucking Equipment Company, on the west by a small agricultural field owned by Liquid Air Corporation, and on the north by a Southern Pacific Railroad easement and Angeles Chemical Company (Angeles); a bulk chemical repackaging facility.

McKesson Chemical Company, a former division of McKesson, operated a bulk chemical repackaging facility at the site from 1976 to 1986. During this period of operation, the facility was organized into four areas for the purpose of chemical packaging:

- A solvent repack area,
- A corrosive repack area,
- A hydrogen peroxide repack area, and
- A Freon blending area.

Forty-four aboveground storage tanks (now demolished) were situated onsite within the four areas of operations. The tanks were contained within 2- to 3-foot-high concrete containment berms and separated by internal dike walls. Twenty-three underground storage tanks (USTs) are presently onsite and predominately located adjacent to the former aboveground solvent tank storage area. Railroad spurs are located along the northern and western boundaries of the site. Loading platforms and underground distribution lines were associated with the offloading of chemicals delivered via the railroad spurs. A drum storage area was used onsite for the storage of hazardous waste.

In September 1985, the DTSC issued a Resource Conservation and Recovery Act (RCRA) Part B Hazardous Waste Facility Permit for the drum-storage area. This area has since been closed under RCRA regulations. The final RCRA closure report was submitted to the DTSC on February 5, 1990 (HLA, 1990a). On June 28, 1990, the DTSC acknowledged that the storage-drum area was officially closed.

At the request of the DTSC, McKesson Environmental Services (MES) conducted three subsurface investigations at the facility during its period of operation. Two studies were undertaken in the aboveground solvent-storage area, and one study was conducted in the corrosive-storage area. Chlorinated solvents were detected in both the soil and groundwater in the aboveground solvent-storage area in these investigations. The corrosive storage area was investigated for USEPA extraction procedure (EP) Toxic compounds; none were detected.

The purpose of the RI was to assess the nature and extent of chemicals of concern in air, soil, surface water, and groundwater associated with the former operations at the McKesson site.

The RI included the monitoring of ambient meteorological conditions and air quality, drilling of soil borings, drilling and installation of groundwater monitoring wells, cone penetrometer testing (CPT)/HydroPunch groundwater sampling, the collection and analysis of surface and subsurface soil samples, and the collection and analysis of surface water and groundwater samples. All field work and physical testing of soil samples was performed by HLA

geologists, engineers, and technicians under the direct oversight of a registered geologist and/or professional engineer. Analytical testing of air, soil, and water samples was performed by a state-certified laboratory.

HLA's investigation of surface and subsurface soil and vadose zone conditions at the McKesson site was conducted in two phases. The first phase of the investigation was conducted from June to August 1990. Thirty-one soil borings were drilled and sampled during the first phase. Samples were also collected from four surface locations. Following review of the data collected during the first phase of the investigation, a second phase soil and vadose zone investigation was conducted in January and February of 1991, during which an additional ten soil borings were drilled and sampled.

Soil samples collected from borings drilled in the first phase of the investigation in the UST area, the aboveground storage tank area, and the Freon-blending area were analyzed for volatile and semivolatile organic compounds, glycols, and petroleum hydrocarbons. Based on the results from the first-phase borings, the samples collected from the three additional borings in the aboveground solvent-storage area were only analyzed for volatile organic compounds.

Soil samples collected in the corrosive and hydrogen peroxide bermed storage area were only analyzed for pH and selected ions and metals, with the exception of the two samples that were additionally analyzed for volatile and semivolatile organics, glycols, and petroleum hydrocarbons.

The groundwater investigation program consisted of the installation, monitoring, and sampling of a total of 18 onsite groundwater monitoring wells. Two wells were installed in a discontinuous perched-water zone encountered at two locations within the site. Twelve wells were installed in the upper portion of the underlying aquifer zone. Four additional wells were installed in the aquifer, two at an intermediate depth, and two at the bottom of the aquifer, to assess vertical hydraulic and chemical distribution characteristics. The monitoring well program was augmented by the collection of water samples using a

HydroPunch sampling device. HydroPunch samples were collected at five onsite locations and twelve offsite locations.

Onsite groundwater monitoring wells were monitored for depth to groundwater 14 times during the period from June 1990 through April 1991. During the same period, three rounds of groundwater sampling were conducted. Samples collected in the first round of sampling conducted in August 1990 were analyzed using the following EPA methods:

- EPA Method 8240 - Volatile organic compounds,
- EPA Method 8270 - Semi-volatile compounds,
- EPA Method 8015 modified - Glycols,
- EPA Method 418.1 - Petroleum hydrocarbons,
- EPA Method 150.1 - pH,
- EPA Method 9050 - Conductivity,
- EPA Method 160.1 - Total dissolved solids,
- EPA Method 9036 - Sulfate,
- EPA Method 425.1 - Surfactants, and
- EPA Method 300.0/6010 - General minerals, selected metals.

Groundwater samples collected during subsequent sampling rounds were analyzed for volatile organics using EPA Method 8240 with selected samples being analyzed for general minerals and Ph. Hydropunch groundwater samples collected from onsite and offsite locations were analyzed for volatile organics using EPA Method 8240.

Impacts to vadose zone soils and groundwater by chlorinated hydrocarbon compounds were identified in this investigation. The predominant compounds detected in both the soil and groundwater are 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethene (PCE), trichloroethene (TCE), and methylene chloride (dichloromethane [DCM]). Elevated concentrations of these compounds detected in the soil appear to be limited in their areal extent to the immediate vicinity, including and surrounding the aboveground solvent storage area. Minor impacts to the soil were identified along the subsurface distribution lines connecting the northern railroad spur to the UST area. No significant impacts to vadose zone soils or groundwater

were identified as resulting from activities associated with the storage, handling, or processing of corrosives, hydrogen peroxides, or glycols.

Two groundwater plumes exhibiting elevated concentrations of VOCs were identified during this investigation. An onsite plume, characterized by elevated concentrations of chlorinated hydrocarbons, including 1,1,1-TCA, PCE, TCE, 1,1-dichloroethene (1,1-DCE), and DCM was detected. Maximum concentrations of the major compounds comprising the onsite plume were detected in groundwater samples collected immediately downgradient of the aboveground solvent-storage area. Elevated concentrations extend offsite both downgradient and upgradient of the McKesson site. Even though a significant reduction of the concentration of compounds is observed perpendicular to the plume axis, the lateral extent of the plume has not been completely assessed. Vertically, the elevated concentration of compounds appear to be restricted to the upper part of the aquifer. No observations were made that would indicate elevated concentrations of dissolved organics or non-aqueous phase liquid solvents exist at depth within the aquifer.

An offsite plume, characterized by elevated concentrations of MEK, MIBK, and BTEX, in addition to concentrations of chlorinated hydrocarbons, was identified to the north (upgradient) and west (cross-gradient) of the McKesson site. This offsite plume extends downgradient from the Angeles site, which appears to be a possible source. Based on the compounds detected in the soil and the groundwater at the Angeles site during a preliminary investigation conducted in 1990 by SCS Engineers and the distribution of compounds detected in the groundwater upgradient of the McKesson site, the Angeles site appears to have contributed to the onsite plume identified at the McKesson site.

The observed distribution of compounds in the vadose zone soils appears to result from two transport processes. Within and in the vicinity of the aboveground solvent-storage area, the observed distribution is most probably the result of vertical migration of liquid-phase solvents through the vadose zone accompanied with lateral spreading along zones of high permeability contrasts. Away from the solvent storage tank area and at depths of 40 to 45 feet bgs, the detected concentrations of volatile organics appear to be the result of volatilization of dissolved compounds present in the groundwater.

The observed plume configuration and aquifer test parameters indicated that the transport of chemical compounds in the groundwater is dominated by advection in a downgradient direction. Lateral to the plume axis, transport appears to be dependent primarily on diffusion. Diffusion also appears to control the distribution of compounds observed in the intermediate and deep zones of the aquifer.

A baseline risk assessment conducted by McLaren/ChemRisk concluded that under current conditions, the concentrations of the selected chemicals of concern detected in the site soils do not pose a significant noncancer risk or a significant increased cancer risk to future onsite residential or occupational populations. Risks to offsite populations were not quantitatively assessed. Site-related health risks associated with the chemicals detected in groundwater were not possible to assess because the relative contributions of probable onsite and offsite sources have not been established. The relationship between health effects and groundwater exposure irrespective of onsite versus offsite contribution of chemicals of concern was used to set cleanup levels for groundwater and soil.

Data collected as part of this investigation are sufficient to completely assess the extent of the groundwater plume identified onsite. However, offsite investigation of groundwater conditions is required to assess the downgradient, upgradient, and lateral extent of the plume. Assessment of soil and groundwater conditions upgradient of the McKesson site, including the Angeles site, is necessary to determine the magnitude of offsite contributions to the plumes identified both on and offsite.

The following activities are recommended to complete the remedial investigation of the McKesson site:

- Upon removal of the USTs, collection and analysis of soil samples from beneath the tanks.
- Analyses of soil samples collected during the tank removal activities should be evaluated.
- A report presenting the results of the UST removals and incorporating data generated during this investigation should be prepared as an addendum to the RI Report.

These activities would complete the assessment of vadose zone soils onsite .

A workplan for the downgradient investigation of the groundwater plume detected onsite should be prepared. The scope of work associated with the downgradient investigation should be designed to monitor and assess the downgradient and lateral extent of the onsite plume.

APPENDIX I
ANALYTICAL RESULTS - AIR

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Table I.1. Summary of Wind Direction and Wind Speed Data

TIME	DATE: 4/27/90	DATE: 4/28/90	DATE: 4/29/90	DATE: 4/30/90	DATE: 5/1/90	DATE: 5/2/90
	WD	WS	WD	WS	WD	WS
0			SSE	4	ESE	3
100			SE	5	WSW	2
200			SE	5	SW	2
300			SW	5	SW	3
400			SW	5	S	3
500			SSW	4	SSE	3
600			SSW	2	ESE	2
700			S	4	E	4
800			SE	4	ESE	8
900			SE	4	SE	9
1000			SE	4	SE	9
1100			S	6	SE	8
1200			SW	6	SE	6
1300			SW	4	SE	7
1400			SSW	5	SSW	8
1500			SSW	6	SSE	7
1600	SSW	5	SSW	7	SSW	5
1700	WSW	5	SW	7	WSW	8
1800	SSW	4	SW	6	WSW	8
1900	SSE	4	SSW	6	WSW	7
2000	SE	5	S	6	WSW	5
2100	SSE	4	SSE	5	WSW	3
2200	SSE	4	S	4	SW	2
2300	SE	4	SSE	2	SW	3
			SE	2	SSE	2
			SE	2	ESE	4

Note:

WD = wind direction

WS = wind speed (miles per hour)

N = north, W = west, S = south, E = east

Table I1. Summary of Wind Direction and Wind Speed Data (continued)

TIME	DATE: 5/3/90		DATE: 5/4/90		DATE: 5/5/90		DATE: 5/6/90		DATE: 5/7/90		DATE: 5/8/90	
	WD	WS										
0	SE	4	WNW	2	ENE	1	ESE	2	SE	3	ESE	5
100	ESE	3	NW	2	ESE	1	ENE	1	SE	5	ESE	5
200	ESE	2	NW	2	SE	1	NW	1	ESE	3	ESE	4
300	SSE	2	NW	1	ENE	1	ENE	1	ESE	2	ESE	4
400	SW	2	WNW	1	NNW	1	NNE	1	ESE	2	E	4
500	SSE	2	WNW	2	NE	1	ENE	1	ESE	2	E	4
600	ESE	2	WNW	2	ENE	2	NNW	1	SE	2	ESE	4
700	NNE	2	WNW	2	NNW	2	NNE	1	ESE	3	ESE	3
800	NNW	3	NW	2	NW	2	WSW	1	ESE	4	ESE	3
900	W	3	NNW	3	NW	3	SW	2	SE	4	SSE	4
1000	WSW	3	NW	4	WSW	3	S	3	SSE	5	SSE	4
1100	WSW	3	W	3	W	4	SSW	3	SSE	6	S	4
1200	WSW	4	SW	4	W	4	SW	4	S	6	SSE	4
1300	SW	6	WSW	5	W	6	SW	6	SSW	6	SSW	5
1400	WSW	7	WSW	7	WSW	9	WSW	7	SSW	6	S	5
1500	WSW	7	W	8	WSW	9	WSW	7	SSE	6	SSW	5
1600	WSW	6	W	7	WSW	7	WSW	6	S	6	SSW	5
1700	W	5	W	6	WNW	5	WSW	6	SSE	6	SSW	6
1800	WSW	5	WSW	4	W	5	WSW	5	S	6	SSE	5
1900	WSW	4	SW	2	W	3	WSW	3	S	5	SSE	4
2000	W	4	WSW	1	WSW	2	SW	3	S	4	WSW	4
2100	WSW	3	SSE	2	WSW	2	WSW	2	S	4	W	3
2200	SW	2	SW	1	WNW	1	SSW	2	SE	4	WNW	2
2300	WSW	2	SSE	1	SSE	1	SSW	2	SE	5	SE	3

Note:

WD = wind direction

WS = wind speed (miles per hour)

N = north, W = west, S = south, E = east

Table II. Summary of Wind Direction and Wind Speed Data (continued)

TIME	DATE: 5/9/90		DATE: 5/10/90		DATE: 5/11/90		DATE: 5/12/90		DATE: 5/13/90		DATE: 5/14/90	
	WD	WS	WD	WS	WD	WS	WD	WS	WD	WS	WD	WS
0	SE	4	WNW	2	WSW	3	ESE	2	WSW	1	S	3
100	ESE	3	W	2	WSW	3	E	1	SSW	2	S	4
200	ENE	2	WNW	2	WSW	3	E	3	ESE	2	SSE	4
300	ESE	2	WNW	3	WSW	2	ESE	3	ESE	2	SE	4
400	ENE	2	WSW	3	WSW	3	E	3	E	1	SSE	2
500	SE	2	WSW	3	SW	3	E	2	NE	1	SSE	2
600	SE	3	WSW	4	WSW	2	E	2	NNW	2	S	2
700	SE	2	WSW	5	WSW	2	E	2	NNW	2	SSE	3
800	SE	2	WSW	5	W	2	E	2	NW	3	SSE	4
900	SE	3	WSW	6	WSW	3	SSE	2	NNW	2	ENE	3
1000	SSE	3	WSW	6	S	4	SSE	3	SW	2	NNE	2
1100	SSW	3	WSW	6	SSW	4	NNW	3	NNE	3	WNW	2
1200	SSE	5	SW	5	SSW	5	W	3	S	4	SSE	3
1300	WSW	6	SW	6	SSW	5	WSW	5	S	4	SSW	4
1400	WSW	6	SW	6	SSW	6	SSW	5	SW	4	WSW	6
1500	WSW	6	WSW	6	SSW	6	WSW	6	SW	5	WSW	6
1600	WSW	7	WSW	7	S	5	WSW	5	WSW	7	WSW	6
1700	WSW	6	WSW	6	S	5	W	5	WSW	7	WSW	7
1800	WSW	6	WSW	7	SSE	5	WSW	6	WSW	6	WSW	6
1900	WSW	5	WSW	6	S	5	W	5	WSW	5	WSW	5
2000	WSW	5	WSW	5	SSW	4	W	4	WSW	4	WSW	5
2100	WSW	4	WSW	5	SSE	3	WSW	3	W	3	WSW	4
2200	W	3	WSW	4	SSE	3	WSW	2	W	3	WSW	3
2300	W	3	SW	3	ESE	2	WSW	2	SW	2	SW	3

Note:

WD = wind direction

WS = wind speed (miles per hour)

N = north, W = west, S = south, E = east

Table I1. Summary of Wind Direction and Wind Speed Data (continued)

TIME	DATE: 5/15/90		DATE: 5/16/90		DATE: 5/17/90		DATE: 5/18/90	
	WD	WS	WD	WS	WD	WS	WD	WS
0	SW	2	NNW	2	W	3	N	2
100	WSW	3	N	3	WNW	1	NNW	2
200	WSW	2	S	2	W	2	NNW	2
300	W	2	ENE	2	SW	2	NW	1
400	W	3	WNW	2	SE	2	WNW	1
500	WNW	3	NNW	1	NE	2	NNW	2
600	NW	2	ENE	1	NNE	2	NNW	1
700	NNW	2	ESE	2	NNE	2	SE	2
800	N	2	SE	2	SSE	2	SE	3
900	WSW	3	ESE	2	W	3	ESE	4
1000	W	4	ESE	2	W	3	SSE	5
1100	SW	4	SW	3	WSW	3		
1200	SSW	5	SW	3	WSW	4		
1300	SSW	5	W	4	SW	5		
1400	SSW	5	WSW	9	WSW	7		
1500	S	6	WSW	8	WSW	6		
1600	SW	5	WSW	6	WSW	7		
1700	WSW	6	WSW	5	WSW	6		
1800	WSW	5	WSW	5	WSW	6		
1900	WSW	4	W	4	WSW	5		
2000	WSW	4	W	3	WSW	4		
2100	WSW	3	W	4	WSW	3		
2200	WSW	2	W	4	WSW	2		
2300	WSW	1	WNW	3	WSW	2		

Note:

WD = wind direction

WS = wind speed (miles per hour)

N = north, W = west, S = south, E = east

MCK0002971



3.4.3
Analytical **Technologies, Inc.**

000004

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 005274

May 22, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson-Santa Fe Springs

Project No.: 17333,155.11

Attention: David Melita

On May 17, 1990, Analytical Technologies, Inc. received two air samples for analysis. One sample was analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of this analysis and the quality control data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

CAS:da

Richard M. Amano
Laboratory Manager

MCK0002972



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON-SANTA FE SPRINGS

PROJECT NO.: 17333,155.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
VOLATILE ORGANICS	GC/MS	EPA 8240



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,155.11
PROJECT NAME : MCKESSON-SANTA FE SPRINGS
ATI I.D. : 005274

DATE RECEIVED : 05/17/90

REPORT DATE : 05/22/90

Table with 4 columns: ATI #, CLIENT DESCRIPTION, MATRIX, DATE COLLECTED. Rows include MCKESSON SITE 1,24-HR and MCKESSON SITE 2,24-HR.

----- TOTALS -----

Summary table with 2 columns: MATRIX, # SAMPLES. Row for AIR with value 2.

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0002974



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,155.11
 PROJECT NAME : MCKESSON-SANTA FE SPRINGS
 CLIENT I.D. : MCKESSON SITE 2,24-HR
 SAMPLE MATRIX : AIR

DATE SAMPLED : 05/17/90
 DATE RECEIVED : 05/17/90
 DATE EXTRACTED : N/A
 DATE ANALYZED : 05/18/90
 UNITS : PPB (V/V)
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<240
BROMOMETHANE	<130
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<70
ACETONE	<420
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	<10
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
BUTANONE (MEK)	<420
1,1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<140
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
TRANS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	<10
DIBROMOCHLOROMETHANE	<10
1,1,2-TRICHLOROETHANE	<10
BENZENE	<10
CIS-1,3-DICHLOROPROPENE	<10
2-CHLOROETHYLVINYLEETHER	<110
BROMOFORM	<50
2-HEXANONE (MBK)	<120
4-METHYL-2-PENTANONE (MIBK)	<120
TETRACHLOROETHENE	<10
TOLUENE	<10
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	112
BFB (%)	93
TOLUENE-D8 (%)	98

MCK0002975



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00527402

MATRIX : AIR

UNITS : PPB (V/V)

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0002976



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,155.11
 PROJECT NAME : MCKESSON-SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 005274
 DATE EXTRACTED : N/A
 DATE ANALYZED : 05/18/90
 UNITS : PPB (V/V)
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<240
BROMOMETHANE	<130
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<70
ACETONE	<420
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	<10
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
2-BUTANONE (MEK)	<420
1,1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<140
DIBROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
TRANS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	<10
DIBROMOCHLOROMETHANE	<10
1,1,2-TRICHLOROETHANE	<10
BENZENE	<10
CIS-1,3-DICHLOROPROPENE	<10
2-CHLOROETHYL VINYLETHER	<110
BROMOFORM	<50
2-HEXANONE (MBK)	<120
4-METHYL-2-PENTANONE (MIBK)	<120
TETRACHLOROETHENE	<10
TOLUENE	<10
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	112
BFB (%)	93
TOLUENE-D8 (%)	98

MCK0002977



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 005274

UNITS : PPB (V/V)

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0002978



QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 005274

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,155.11
PROJECT NAME : MCKESSON-SANTA FE SPRINGS
REF I.D. : 00527402

DATE EXTRACTED : N/A
DATE ANALYZED : 05/18/90
SAMPLE MATRIX : AIR
UNITS : PPB (V/V)

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SPIKED SAMPLE, SPIKED % REC., DUP. SAMPLE REC., DUP. % REC., RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100



Hardin
15621 Rd
Tustin, California 92680
714/259-7892 -- 213/617-7232
Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

Lab: ATI

Samplers: David Melita

Job Number: 17333155.11

Name/Location: McKesson - Santa Fe Springs

Recorder: David Melita
(Signature Required)

Project Manager: David Melita

ANALYSIS REQUESTED	
<input type="checkbox"/>	EPA 601/8010
<input type="checkbox"/>	EPA 602/8020
<input checked="" type="checkbox"/>	EPA 624/8240
<input checked="" type="checkbox"/>	EPA 626/8270
<input type="checkbox"/>	Priority Pollut. Metals
<input type="checkbox"/>	Benzene/Toluene/Xylene
<input type="checkbox"/>	Total Petrol. Hydrocarb.

STATION DESCRIPTION/ NOTES
McKesson Site 1 24 kg
McKesson Site 2 24 kg

SOURCE CODE	MATRIX	#CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			
			Yr	Wk	Seq	Yr	Mo	DY	Time
61	Water Soil Oil Sediment	Unpres. H ₂ O HNO ₃				9005	17	10	45
61	Water Soil Oil Sediment	Unpres. H ₂ O HNO ₃				9005	17	11	01

005274

LAB NUMBER				MISCELLANEOUS				CHAIN OF CUSTODY RECORD					
Yr	Wk	Seq		COL	MTD	CD	QA	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME	DISPATCHED BY: (Signature)	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
			MCK0002980					<u>David Melita</u>	<u>F.A. Wood</u>	5/16/90 4:15			
								<u>F.A. Wood</u>	<u>Bob De Bay</u>	5/17/90 1:00			
								<u>F.A. Wood</u>	<u>Bob De Bay</u>	5/17/90 6:55			
									<u>Bob De Bay</u>				



3.4.3
Analytical **Technologies**, Inc.

000335

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 005305

May 22, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson-Santa Fe Springs

Project No.: 17333,155.11

Attention: David Melita

On May 18, 1990, Analytical Technologies, Inc. received two air samples for analysis. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of this analysis and the quality control data are enclosed.

Carolyn A. Sites
GC/MS Supervisor

CAS:da

Richard M. Amano
Laboratory Manager

MCK0002981



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON-SANTA FE SPRINGS

PROJECT NO.: 17333,155.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
VOLATILE ORGANICS	GC/MS	EPA 8240

MCK0002982



Analytical **Technologies, Inc.**

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,155.11
PROJECT NAME : MCKESSON-SANTA FE SPRINGS
ATI I.D. : 005305

DATE RECEIVED : 05/18/90
REPORT DATE : 05/22/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MCKESSON SITE 3,8-HOUR	AIR	05/18/90
02	MCKESSON SITE 4,8-HOUR	AIR	05/18/90

----- TOTALS -----

MATRIX	# SAMPLES
AIR	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0002983



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,155.11
 PROJECT NAME : MCKESSON-SANTA FE SPRINGS
 CLIENT I.D. : MCKESSON SITE 3,8-HOUR
 SAMPLE MATRIX : AIR

DATE SAMPLED : 05/18/90
 DATE RECEIVED : 05/18/90
 DATE EXTRACTED : N/A
 DATE ANALYZED : 05/20/90
 UNITS : PPB (V/V)
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<240
BROMOMETHANE	<130
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<70
ACETONE	<420
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	<10
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
-BUTANONE (MEK)	<420
1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<140
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
TRANS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	<10
DIBROMOCHLOROMETHANE	<10
1,1,2-TRICHLOROETHANE	<10
BENZENE	<10
CIS-1,3-DICHLOROPROPENE	<10
2-CHLOROETHYLVINYLEETHER	<110
BROMOFORM	<50
2-HEXANONE (MBK)	<120
4-METHYL-2-PENTANONE (MIBK)	<120
TETRACHLOROETHENE	<10
TOLUENE	<10
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	103
BFB (%)	96
TOLUENE-D8 (%)	101

MCK0002984



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00530501

MATRIX : AIR

UNITS : PPB (V/V)

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0002985

GCMS - RESULTS

ATI I.D. : 00530502

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 05/18/90
PROJECT #	: 17333,155.11	DATE RECEIVED	: 05/18/90
PROJECT NAME	: MCKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MCKESSON SITE 4,8-HOUR	DATE ANALYZED	: 05/20/90
SAMPLE MATRIX	: AIR	UNITS	: PPB (V/V)
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<240
BROMOMETHANE	<130
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<70
ACETONE	<420
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	<10
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
BUTANONE (MEK)	<420
1,1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<140
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
TRANS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	<10
DIBROMOCHLOROMETHANE	<10
1,1,2-TRICHLOROETHANE	<10
BENZENE	<10
CIS-1,3-DICHLOROPROPENE	<10
2-CHLOROETHYLVINYLEETHER	<110
BROMOFORM	<50
2-HEXANONE (MBK)	<120
4-METHYL-2-PENTANONE (MIBK)	<120
TETRACHLOROETHENE	<10
TOLUENE	<10
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	100
TOLUENE-D8 (%)	101

MCK0002986



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00530502

MATRIX : AIR

UNITS : PPB (V/V)

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0002987



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,155.11
 PROJECT NAME : McKESSON-SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 005305
 DATE EXTRACTED : N/A
 DATE ANALYZED : 05/20/90
 UNITS : PPB (V/V)
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<240
BROMOMETHANE	<130
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<70
ACETONE	<420
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	<10
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
2-BUTANONE (MEK)	<420
1,1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
ETHYL ACETATE	<140
DIBROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
TRANS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	<10
DIBROMOCHLOROMETHANE	<10
1,1,2-TRICHLOROETHANE	<10
BENZENE	<10
CIS-1,3-DICHLOROPROPENE	<10
2-CHLOROETHYL VINYLETHER	<110
BROMOFORM	<50
2-HEXANONE (MBK)	<120
4-METHYL-2-PENTANONE (MIBK)	<120
TETRACHLOROETHENE	<10
TOLUENE	<10
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	103
BFB (%)	96
TOLUENE-D8 (%)	102

MCK0002988



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 005305

UNITS : PPB (V/V)

COMPOUNDS

RESULTS

NONE DETECTED

N/A



QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 005305

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,155.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00527402

DATE EXTRACTED : N/A
DATE ANALYZED : 05/18/90
SAMPLE MATRIX : AIR
UNITS : PPB (V/V)

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100



ing Lawson Associates
 1 Redhill Avenue, Suite 100
 Tustin, California 92680
 714/259-7992 — 213/617-7232
 Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

005305

A.T.I.

Lab:

Job Number: 17332, 155.11

Name/Location: McKesson - Santa Fe Springs

Project Manager: David Melita

Samplers: David Melita

Recorder: David Melita

SOURCE	MATRIX				#CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			STATION DESCRIPTION/NOTES	
	Water	Sediment	Soil	Oil		Yr	Wk	Seq	Yr	Mo	Dy		Time
61					Unpres. H ₂ SO ₄ HNO ₃ Light seal				90	05	18	0700	McKesson Site 3, 8-hour
61									90	05	18	0700	McKesson Site 4, 8-hour

ANALYSIS REQUESTED												
EPA 601/8010												
EPA 602/8020												
EPA 624/8240												
EPA 625/8270												
Priority Plint. Metals												
Benzene/Toluene/Xylene												
Total Petrol. Hydrocarb.												

LAB NUMBER				DEPTH IN FEET				COL MTD CD		QA CODE		MISCELLANEOUS						
Yr	Wk	Seq																
												MCK0002991						

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) <i>David Melita</i>	RECEIVED BY: (Signature) <i>R.L. Wood</i>	DATE/TIME 1527519-0
RELINQUISHED BY: (Signature) <i>Bob DeBay</i>	RECEIVED BY: (Signature) <i>Bob DeBay</i>	DATE/TIME 5/18/90
RELINQUISHED BY: (Signature) <i>Bob DeBay</i>	RECEIVED BY: (Signature) <i>Mason Land DeBay</i>	DATE/TIME 5/18/90
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT			



343
Analytical **Technologies**, Inc.

000326

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 005389

May 30, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson-Santa Fe Springs

Project No.: 17333,155.11

Attention: David Melita

On May 24, 1990, Analytical Technologies, Inc. received one air sample for analysis. The sample was analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The result of this analysis and the quality control data are enclosed.

Carolyn A. Sites

Carolyn A. Sites
GC/MS Supervisor

CAS:nm

Richard M. Amano
Laboratory Manager

MCK0002992



Analytical **Technologies**, Inc.

ATI I.D. 005389

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON-SANTA FE SPRINGS

PROJECT NO.: 17333,155.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
VOLATILE ORGANICS	GC/MS	EPA 8240

MCK0002993



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,155.11
PROJECT NAME : MCKESSON-SANTA FE SPRINGS
ATI I.D. : 005389

DATE RECEIVED : 05/24/90

REPORT DATE : 05/30/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SITE 1 24-HR SAMPLE	AIR	05/24/90

----- TOTALS -----

MATRIX	# SAMPLES
AIR	1

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0002994



ATI I.D. : 00538901

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 05/24/90
PROJECT #	: 17333,155.11	DATE RECEIVED	: 05/24/90
PROJECT NAME	: MCKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: SITE 1 24-HR SAMPLE	DATE ANALYZED	: 05/25/90
SAMPLE MATRIX	: AIR	UNITS	: PPB (V/V)
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<240
BROMOMETHANE	<130
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<70
ACETONE	<420
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	<10
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
BUTANONE (MEK)	<420
1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<140
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
TRANS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	<10
DIBROMOCHLOROMETHANE	<10
1,1,2-TRICHLOROETHANE	<10
BENZENE	<10
CIS-1,3-DICHLOROPROPENE	<10
2-CHLOROETHYLVINYLEETHER	<110
BROMOFORM	<50
2-HEXANONE (MBK)	<120
4-METHYL-2-PENTANONE (MIBK)	<120
TETRACHLOROETHENE	<10
TOLUENE	<10
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

,2-DICHLOROETHANE-D4 (%)	99
BFB (%)	106
TOLUENE-D8 (%)	106

MCK0002995



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00538901

MATRIX : AIR

UNITS : PPB (V/V)

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0002996



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,155.11
 PROJECT NAME : MCKESSON-SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 005389
 DATE EXTRACTED : N/A
 DATE ANALYZED : 05/25/90
 UNITS : PPB (V/V)
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<240
BROMOMETHANE	<130
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<70
ACETONE	<420
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<10
1,1-DICHLOROETHANE	<10
1,2-DICHLOROETHENE (TOTAL)	<10
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
2-BUTANONE (MEK)	<420
1,1,1-TRICHLOROETHANE	<10
CARBON TETRACHLORIDE	<10
NYL ACETATE	<140
ROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
TRANS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	<10
DIBROMOCHLOROMETHANE	<10
1,1,2-TRICHLOROETHANE	<10
BENZENE	<10
CIS-1,3-DICHLOROPROPENE	<10
2-CHLOROETHYLVINYLEETHER	<110
BROMOFORM	<50
2-HEXANONE (MBK)	<120
4-METHYL-2-PENTANONE (MIBK)	<120
TETRACHLOROETHENE	<10
TOLUENE	<10
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	99
BFB (%)	105
TOLUENE-D8 (%)	106



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 005389

UNITS : PPB (V/V)

COMPOUNDS

RESULTS

NONE DETECTED

N/A

QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) ATI I.D. : 005389
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : N/A
 PROJECT # : 17333,155.11 DATE ANALYZED : 05/18/90
 PROJECT NAME : MCKESSON-SANTA FE SPRINGS SAMPLE MATRIX : AIR
 REF I.D. : 00527402 UNITS : PPB (V/V)

COMPOUNDS	SAMPLE CONC. RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.		RPD
					SPIKED SAMPLE	% REC.	
1,1-DICHLOROETHENE	<10	52.5	45	86	48	91	6
TRICHLOROETHENE	<10	52.4	48	92	50	95	4
CHLOROBENZENE	<10	57.0	54	95	56	98	4
TOLUENE	<10	69.7	67	96	67	96	0
BENZENE	<10	76.0	70	92	71	93	1

$$\text{\% Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0002999



Herdling
 15621 Rd
 Avenue, Suite 100
 Tustin, California 92680
 714/259-7982 - 213/617-7232
 Telecopy: 714/259-1378

005 30 00

CHAIN OF CUSTODY FORM

Lab: A.T.I.

Samplers: David Melita

Job Number: 17333/153.11

Name/Location: McKesson - Santa Fe Springs

Project Manager: David Melita

Recorder: _____

SOURCE CODE	MATRIX			#CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE					
	Water	Sediment	Soil		Yr	Wk	Seq	Yr	Mo	Dy	Time		
05				1			005	9	005	24			

STATION DESCRIPTION / NOTES
Site 1 24-hr sample

ANALYSIS REQUESTED
EPA 601/8010
EPA 602/8020
EPA 624/8240
EPA 625/8270
Priority Pllent, Metals
Benzene/Toluene/Xylene
Total Petrol. Hydrocarb.

LAB NUMBER	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD	
					RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
MCK0003000					David Melita	R. J. Ward
					R. J. Ward	Bob DeBry
					Bob DeBry	

RECEIVED FOR LAB BY: Signature DATE/TIME: 5/24/90 15:20

RECEIVED FOR LAB BY: Signature DATE/TIME: 5/24/90 17:00

RECEIVED FOR LAB BY: Signature DATE/TIME: _____

RECEIVED FOR LAB BY: Signature DATE/TIME: _____

DISPATCHED BY: (Signature) DATE/TIME: _____

METHOD OF SHIPMENT: _____

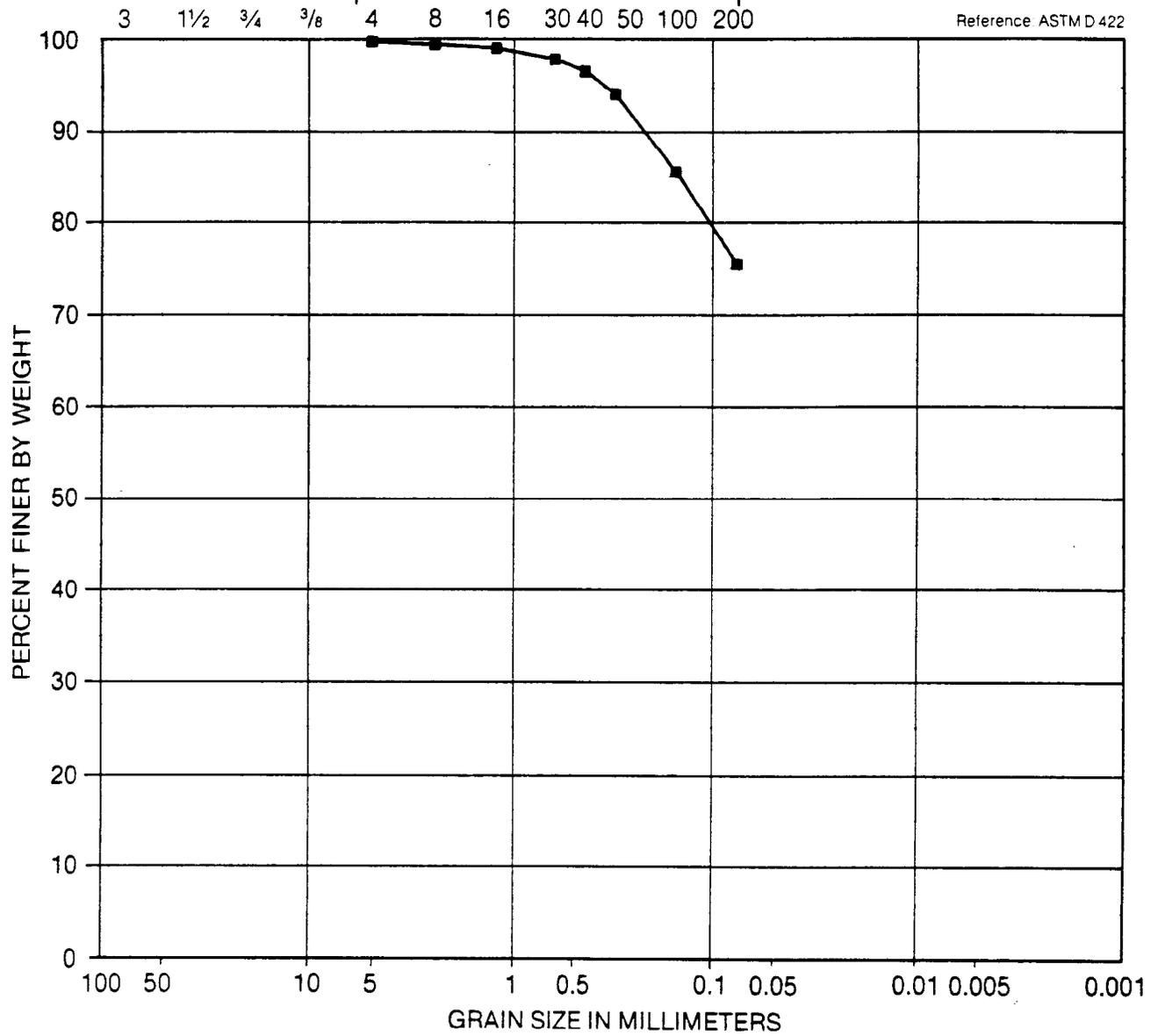
White Laboratory Copy Yellow Project Office Copy Pink Field or Office Copy

6533

APPENDIX J
PHYSICAL PROPERTIES TEST RESULTS - SOIL

MCK0003001

U.S. Standard Sieve Size (in.) U.S. Standard Sieve Numbers Hydrometer



Reference ASTM D 422

COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MW-02 @ 41.5 FT	BROWN LEAN CLAY W/SAND (CL)

MCK0003002



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Engineers Geologists
& Geophysicists

Particle Size Analysis

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J1

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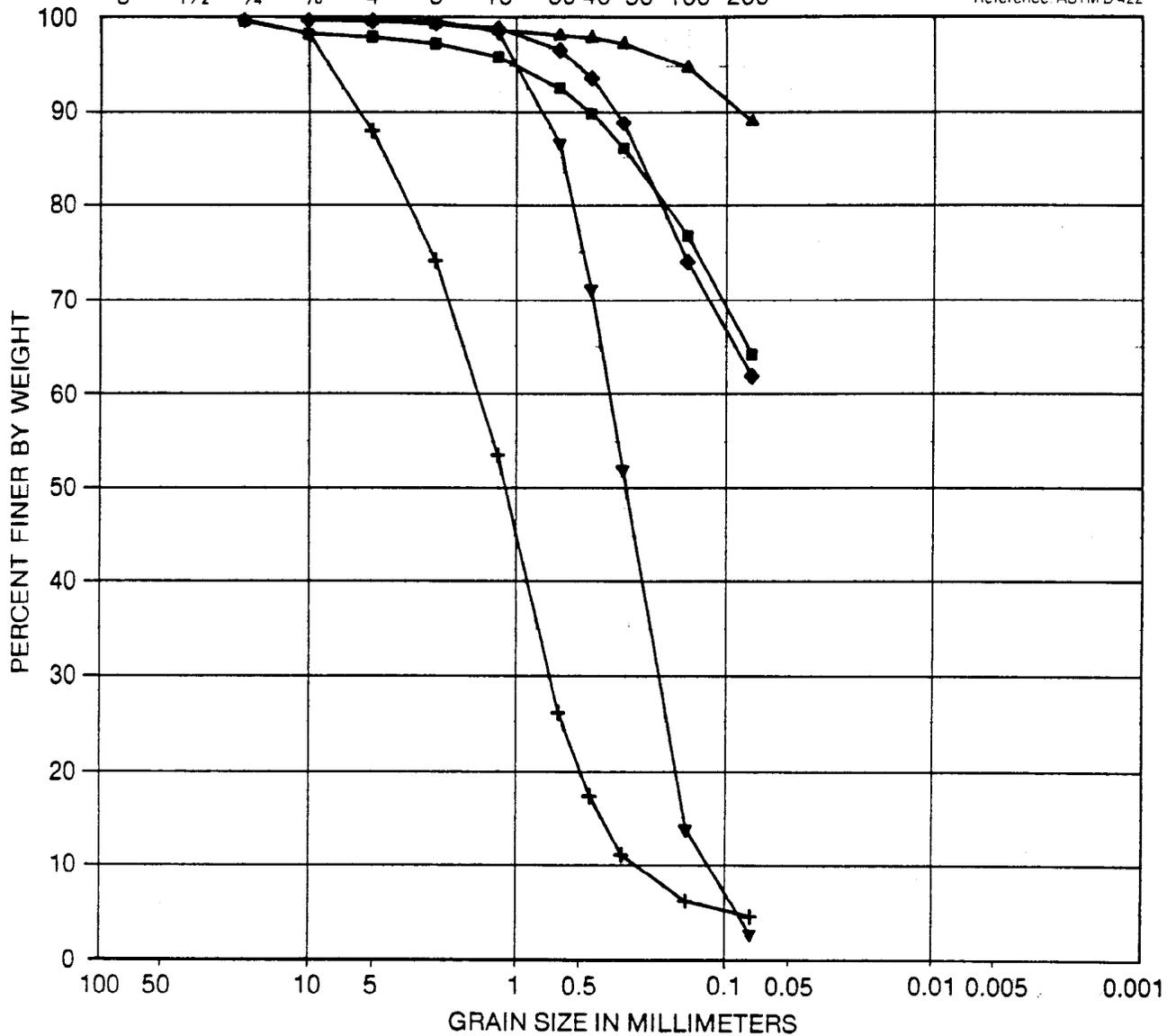
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U.S. Standard Sieve Size (in.) U.S. Standard Sieve Numbers Hydrometer

3 1½ ¾ ⅜ 4 8 16 30 40 50 100 200

Reference ASTM D 422



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	SB-02 @ 0.5 FT	BROWN SANDY LEAN CLAY (CL)
▲	SB-02 @ 30.5 FT	BROWN SILT (ML)
▼	SB-04 @ 55.5 FT	BROWN SAND (SP)
◆	SB-10 @ 36.0 FT	BROWN SANDY SILT (ML)
+	SB-11 @ 20.5 FT	BROWN SAND W/SILT (SW-SM)

MCK0003003



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Particle Size Analysis

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J2

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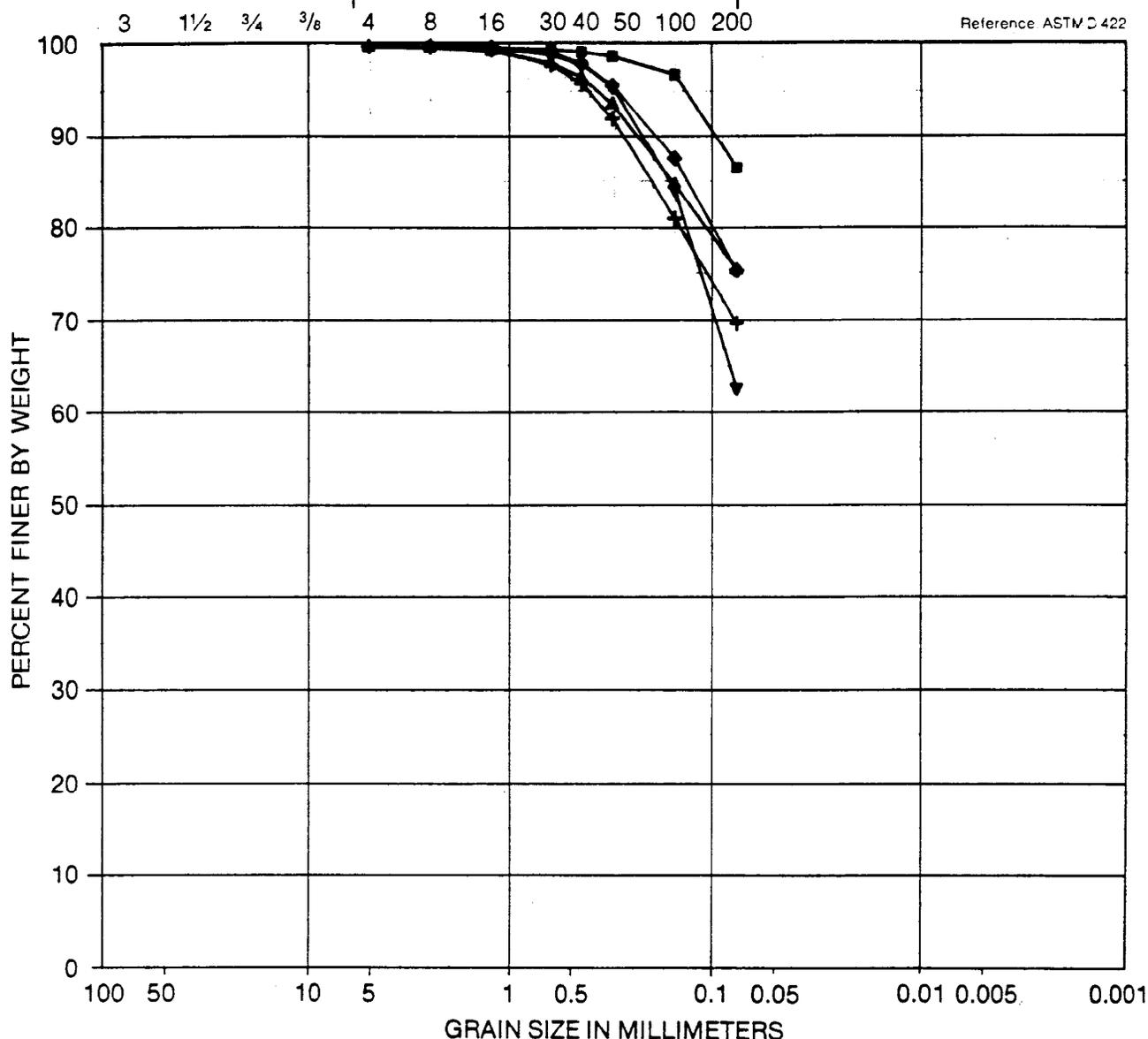
DATE

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DATE

U.S. Standard Sieve Size (in.) U.S. Standard Sieve Numbers Hydrometer



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	SB-11 @ 25.5 FT	BROWN SILT (ML)
▲	SB-11 @ 40.5 FT	BROWN SILT W/SAND (ML)
▼	SB-12 @ 25.0 FT	BROWN SANDY LEAN CLAY (CL)
◆	SB-12 @ 30.0 FT	BROWN LEAN CLAY W/SAND (CL)
+	SB-13 @ 35.5 FT	SILT W/SAND (ML)

MCK0003004



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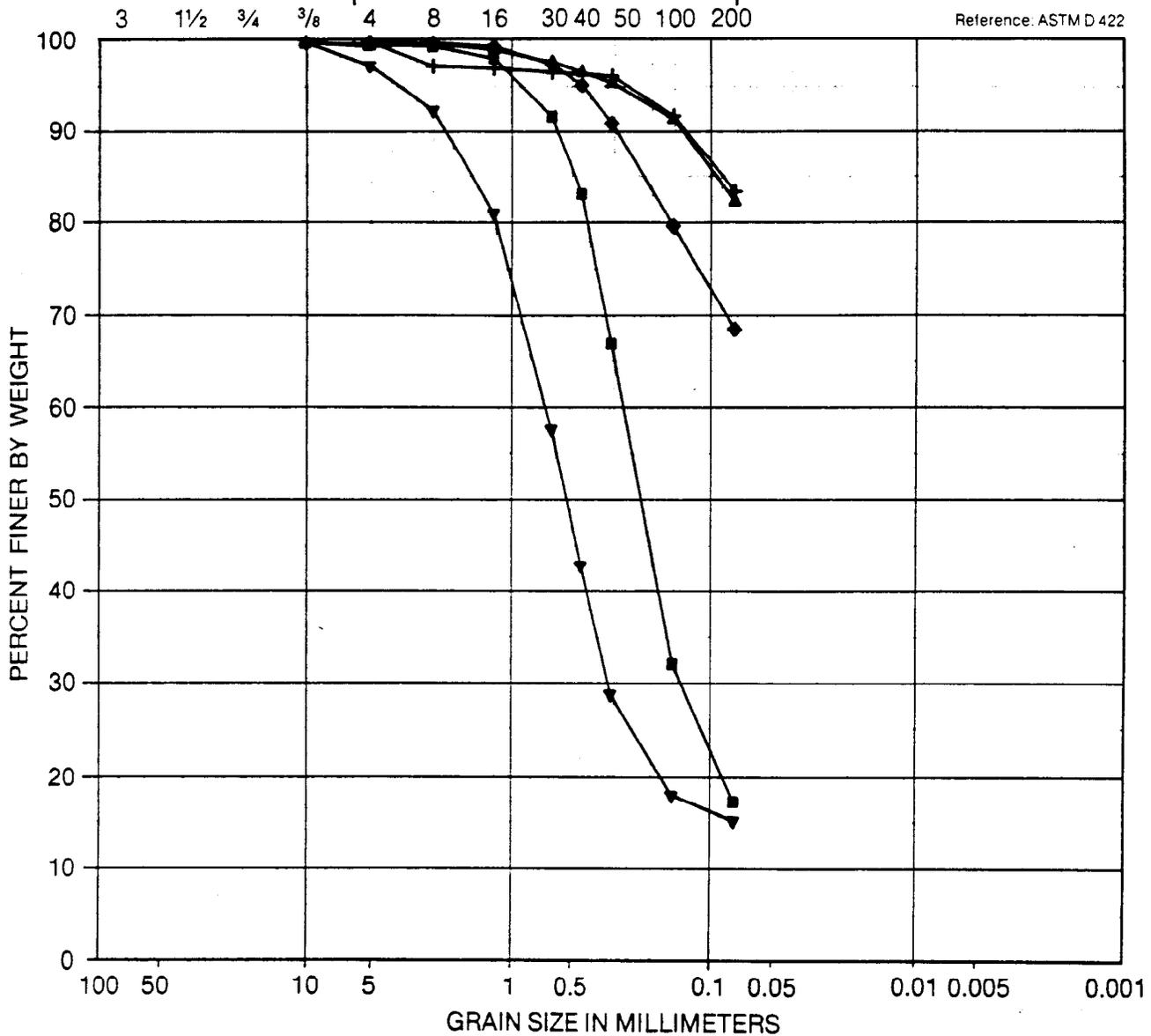
Particle Size Analysis

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J3

U.S. Standard Sieve Size (in.) ——— U.S. Standard Sieve Numbers ——— Hydrometer



Reference: ASTM D 422

COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	SB-13 @ 56.0 FT	BROWN SILTY SAND (SM)
▲	SB-14 @ 5.5 FT	BROWN LEAN CLAY W/SAND (CL)
▼	SB-14 @ 15.5 FT	BROWN SILTY SAND (SM)
◆	SB-14 @ 35.5 FT	BROWN SANDY SILT (ML)
+	SB-19 @ 30.5 FT	BROWN SILT W/SAND (ML)



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& Geophysicists

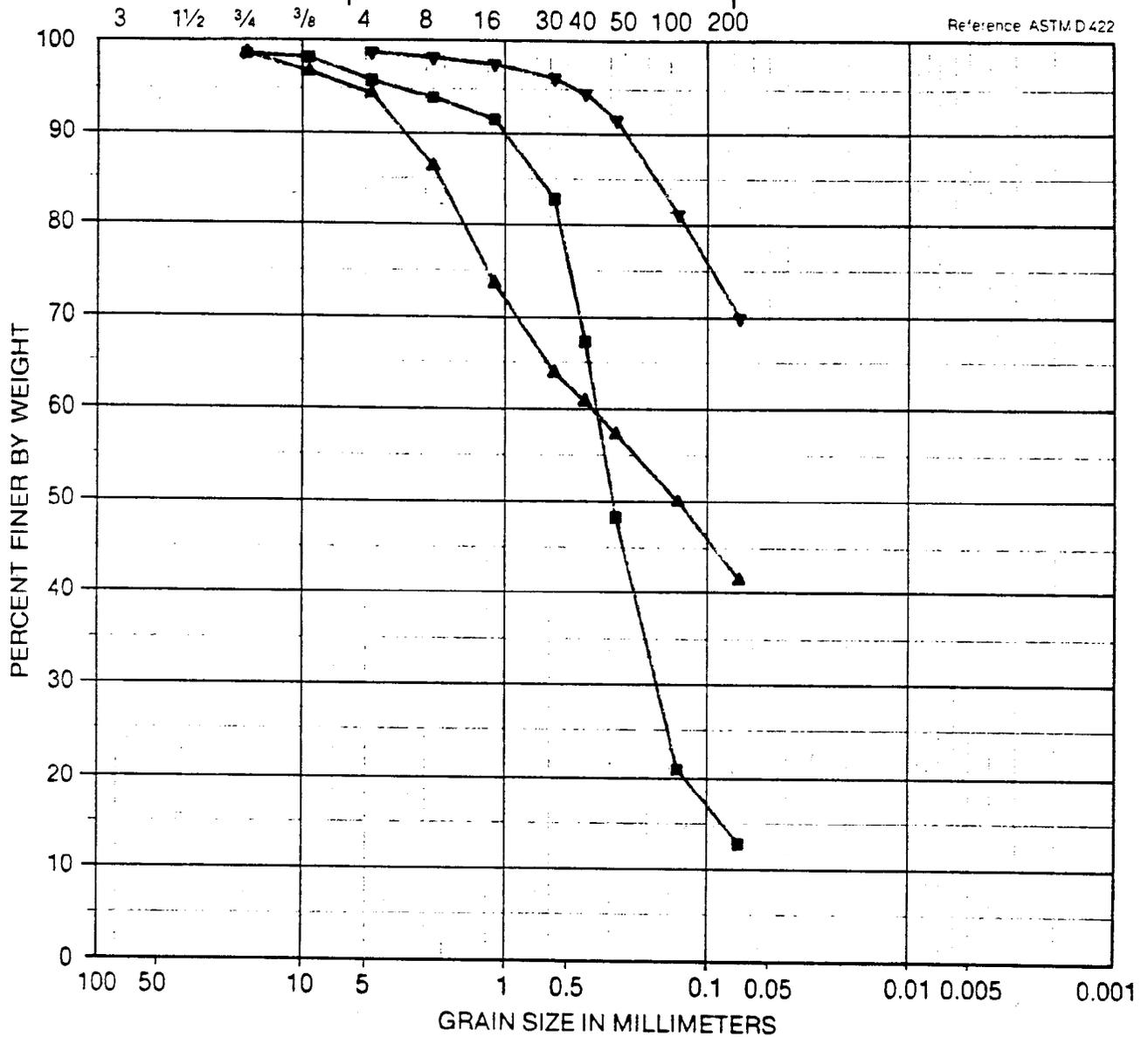
Particle Size Analysis
McKesson Corporation Property
Santa Fe Springs, California

MCK0003005

PLATE

J4

U.S. Standard Sieve Size (in.) → ← U.S. Standard Sieve Numbers → ← Hydrometer



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MK-SB-09 @ 20.5 FT	BROWN SILTY SAND (SM)
▲	MK-SB-09 @ 25.5 FT	BROWN CLAYEY SAND (SC)
▼	MK-SB-09 @ 36.0 FT	BROWN LEAN CLAY W/SAND (CL)

MCK0003006



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& Geophysicists

Particle Size Analysis

McKesson Corporation Property
Santa Fe Springs, California

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J5

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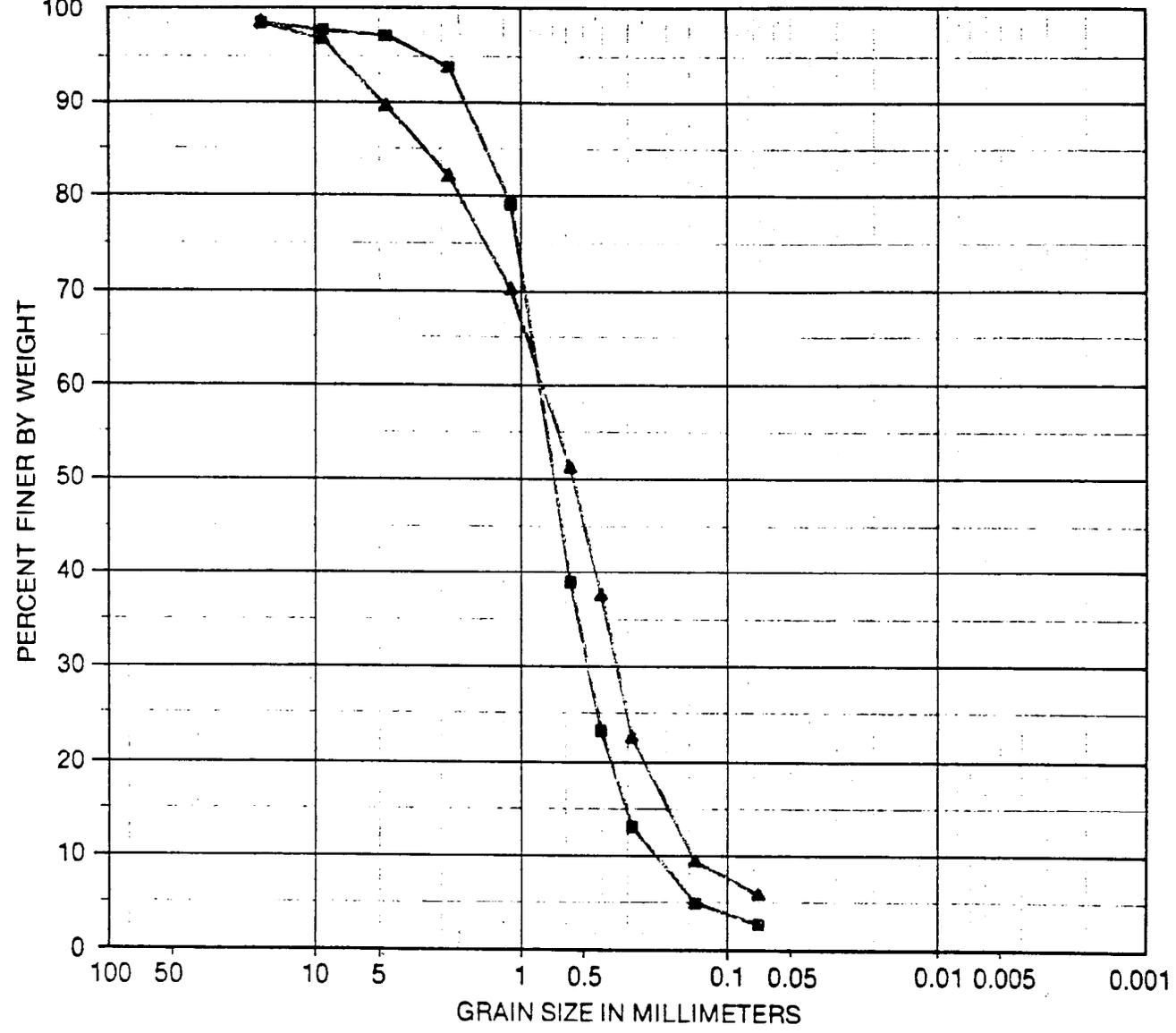
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TAL

DATE
6/92

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DATE

U.S. Standard Sieve Size (in.) → U.S. Standard Sieve Numbers → Hydrometer
 3 1½ ¾ ⅜ 4 8 16 30 40 50 100 200 Reference ASTM D 422



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MK-SB-19 @ 20.5 FT	BROWN SAND (SP)
▲	MK-SB-12 @ 15.5 FT	BROWN SAND W/SILT (SW-SM)

MCK0003007



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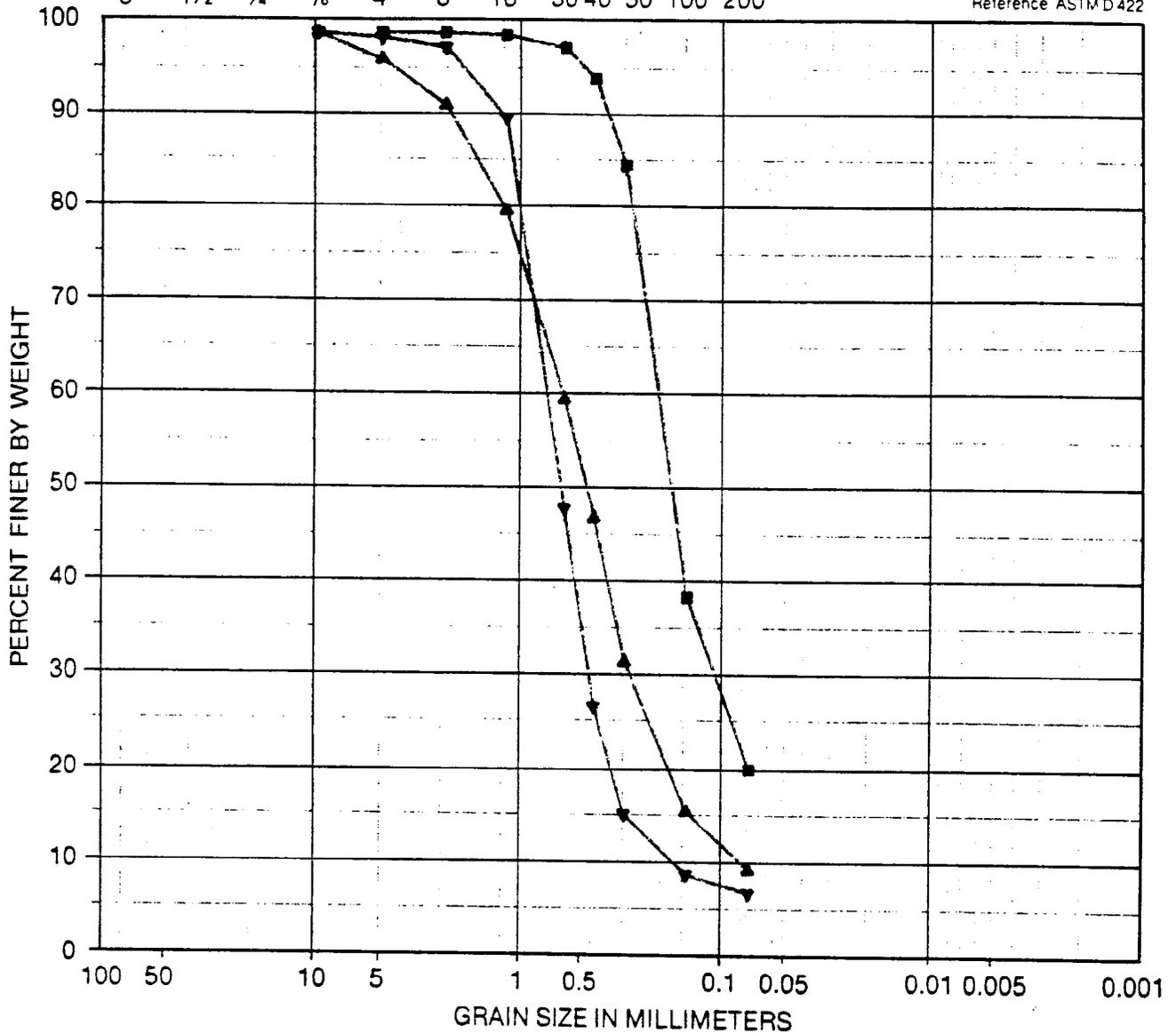
Particle Size Analysis
 McKesson Corporation Property
 Santa Fe Springs, California

PLATE
J6

U.S. Standard Sieve Size (in.) ——— U.S. Standard Sieve Numbers ——— Hydrometer

3 1½ ¾ ⅜ 4 8 16 30 40 50 100 200

Reference ASTM D 422



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MK-SB-13 @ 45.5 FT	BROWN SILTY SAND (SM)
▲	MK-SB-13 @ 15.5 FT	BROWN SAND W/SILT (SW-SM)
▼	MK-SB-13 @ 20.5 FT	BROWN SAND W/SILT (SP-SM)

MCK0003008



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Particle Size Analysis

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J7

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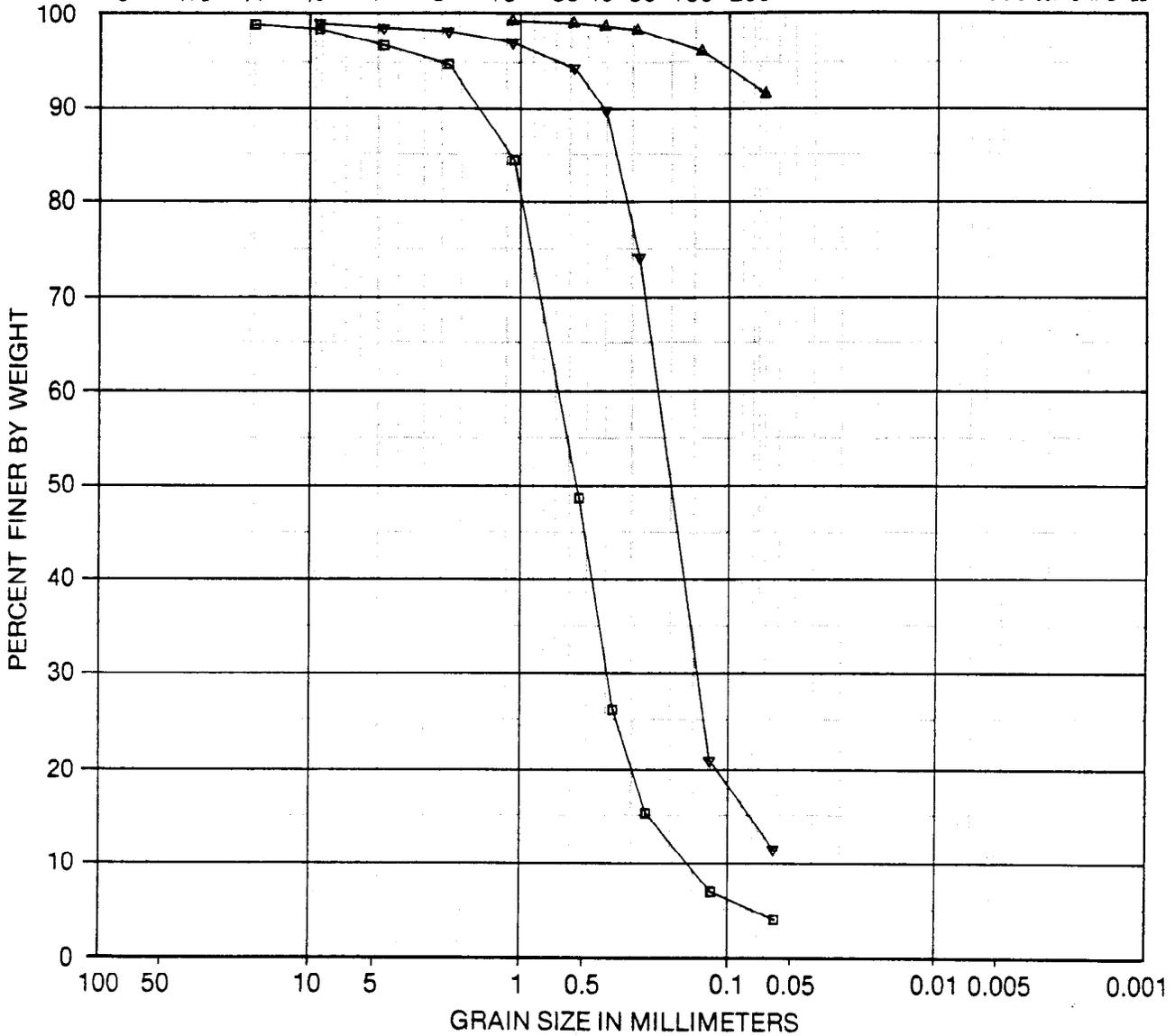
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DATE

U.S. Standard Sieve Size (in.) ——— U.S. Standard Sieve Numbers ——— Hydrometer

3 1½ ¾ ⅜ 4 8 16 30 40 50 100 200

Reference: ASTM D 422



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MK SB-6 @ 25.5 FT	BROWN SAND W/SILT (SP-SM)
▲	MK SB-6 @ 30.5 FT	BROWN SILT (ML)
▼	MK SB-15 @ 20.5 FT	BROWN SILTY SAND (SM)

MCK0003009



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Particle Size Analysis

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J8

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JOB NUMBER
17333,168.11

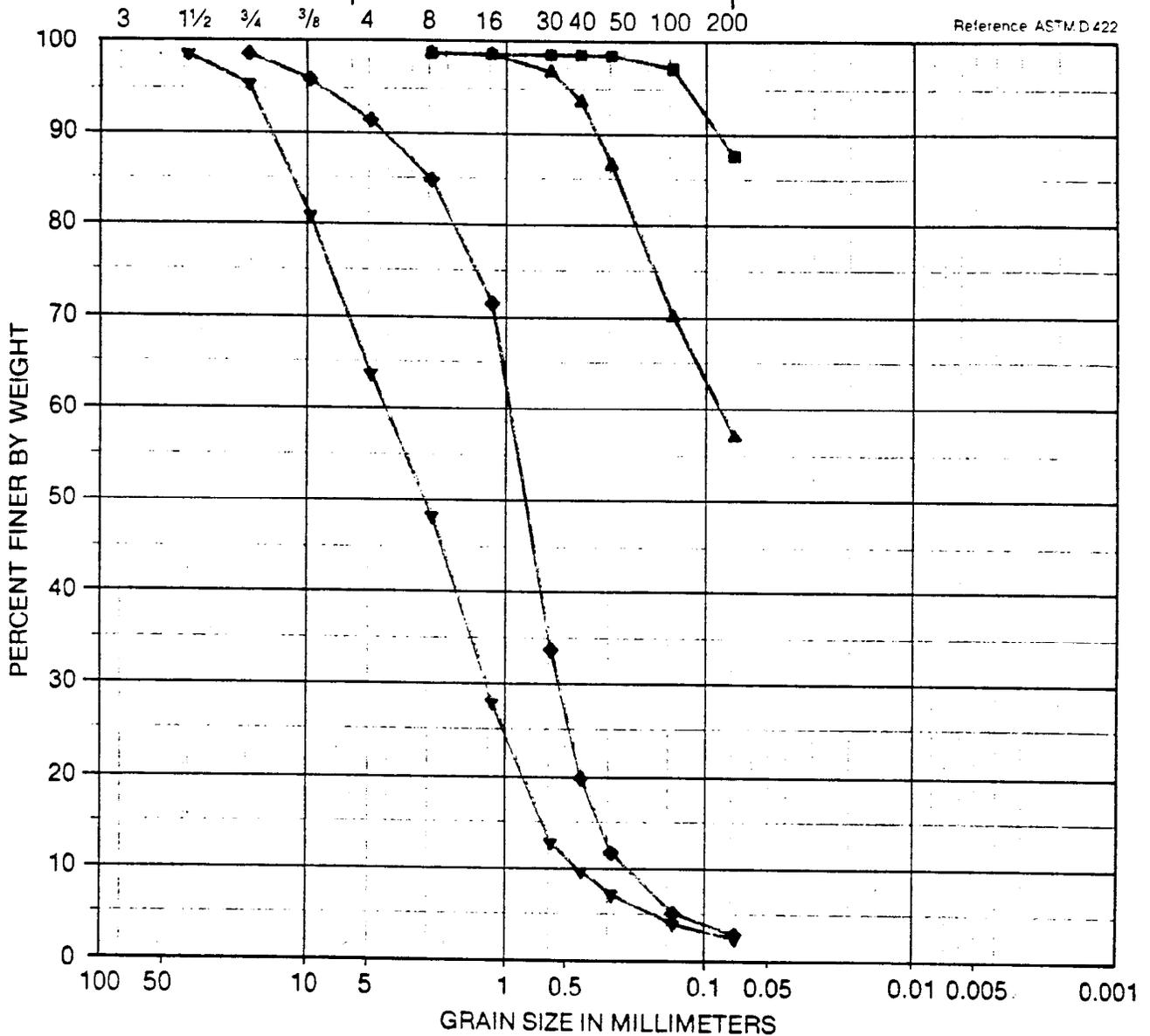
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DATE
6/92

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DATE

U.S. Standard Sieve Size (in.) U.S. Standard Sieve Numbers Hydrometer



COBBLES	CCARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MK-SB-15 @ 30.5 FT	BROWN LEAN CLAY (CL)
▲	MK-SB-15 @ 40.5 FT	BROWN SANDY SILT (ML)
▼	MK-SB-16 @ 15.5 FT	BROWN SAND W/GRAVEL (SW)
◆	MK-SB-16 @ 20.5 FT	BROWN SAND (SP)

MCK0003010



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Particle Size Analysis

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Santa Fe Springs, California

PLATE

J9

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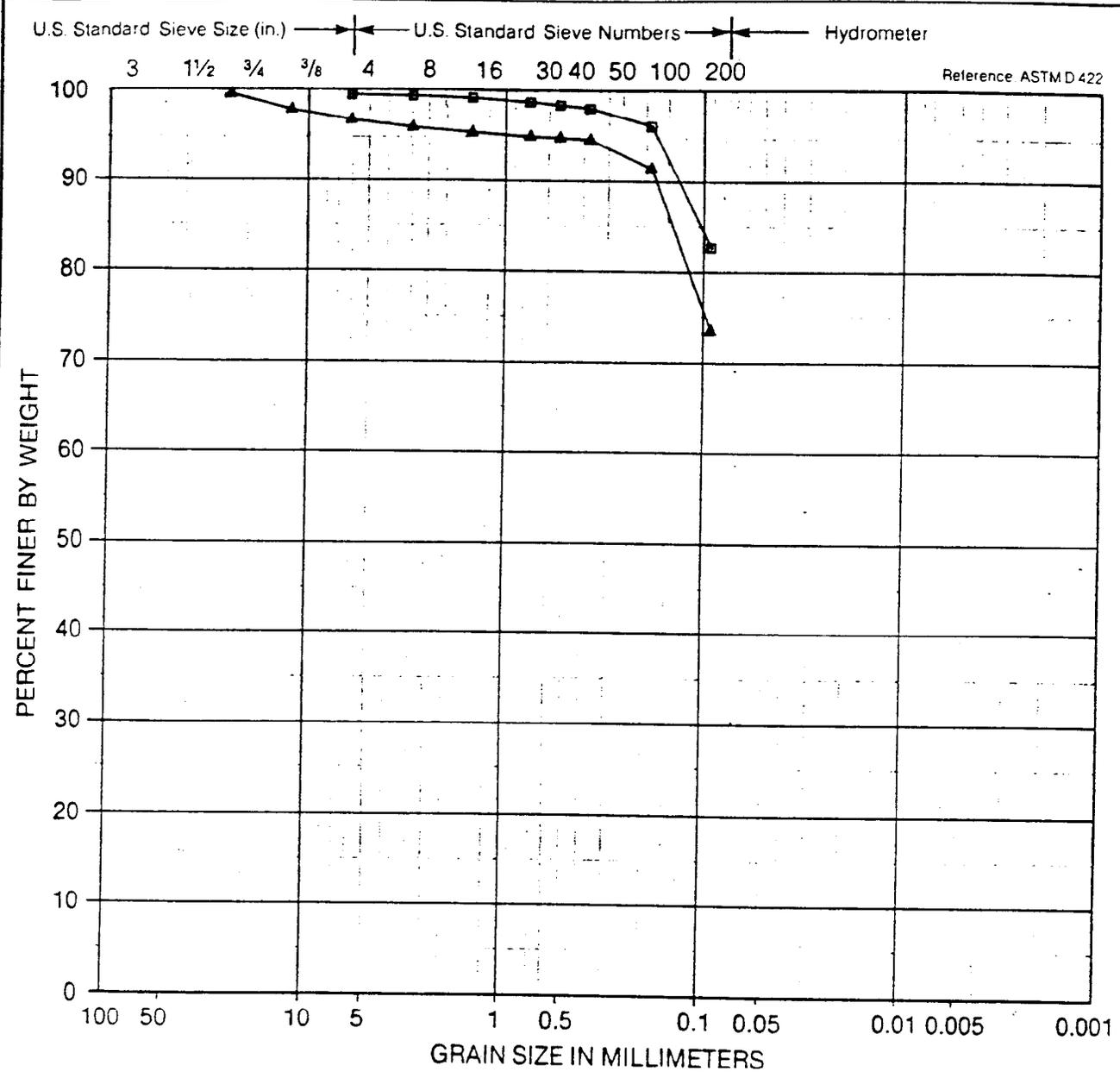
JOB NUMBER
17333,168.11

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6/92

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COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MK-SB-17A @ 117.5 FT	BROWN SILT W/SAND (ML)
▲	MK-SB-17A @ 124.0 FT	BROWN SILT W/SAND (ML)

MCK0003011



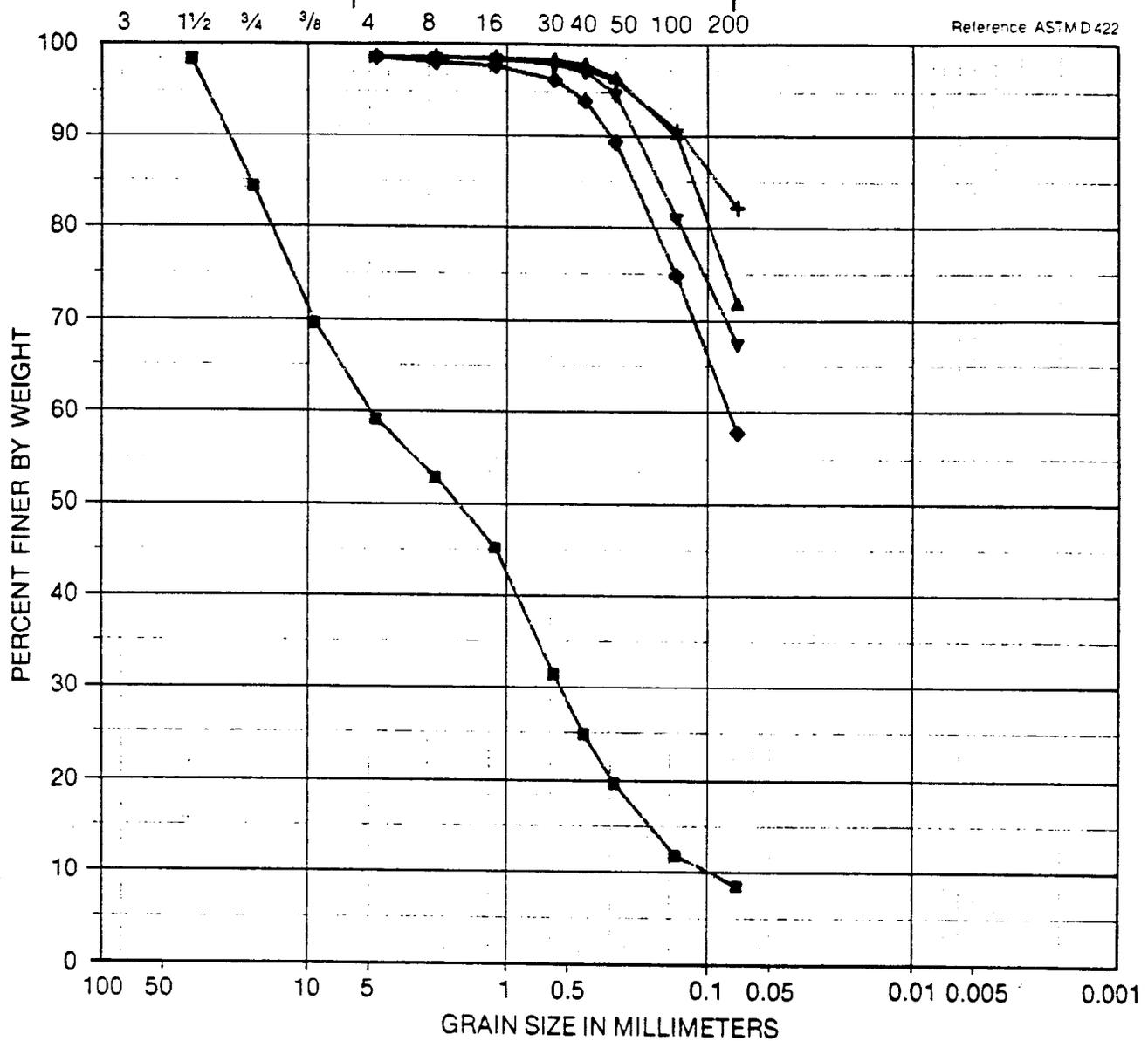
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Particle Size Analysis
 McKesson Corporation Property
 Santa Fe Springs, California

PLATE
J10

DRAWN	JOB NUMBER 17333,168.11	APPROVED TAK	DATE 6/92	REVISED	DATE
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U.S. Standard Sieve Size (in.) ——— U.S. Standard Sieve Numbers ——— Hydrometer



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			

Symbol	Sample Source	Classification
■	MK-SB-32 @ 20.5 FT	BROWN SAND W/SILT AND GRAVEL (SP-SM)
▲	MK-SB-32 @ 25.5 FT	BROWN SILT W/SAND (ML)
▼	MK-SB-32 @ 30.5 FT	BROWN SANDY SILT (ML)
◆	MK-SB-32 @ 35.5 FT	BROWN SANDY SILT (ML)
+	MK-SB-32 @ 40.5 FT	BROWN LEAN CLAY W/SAND (CL)



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Particle Size Analysis

McKesson Corporation Property
Santa Fe Springs, California

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PLATE

J11

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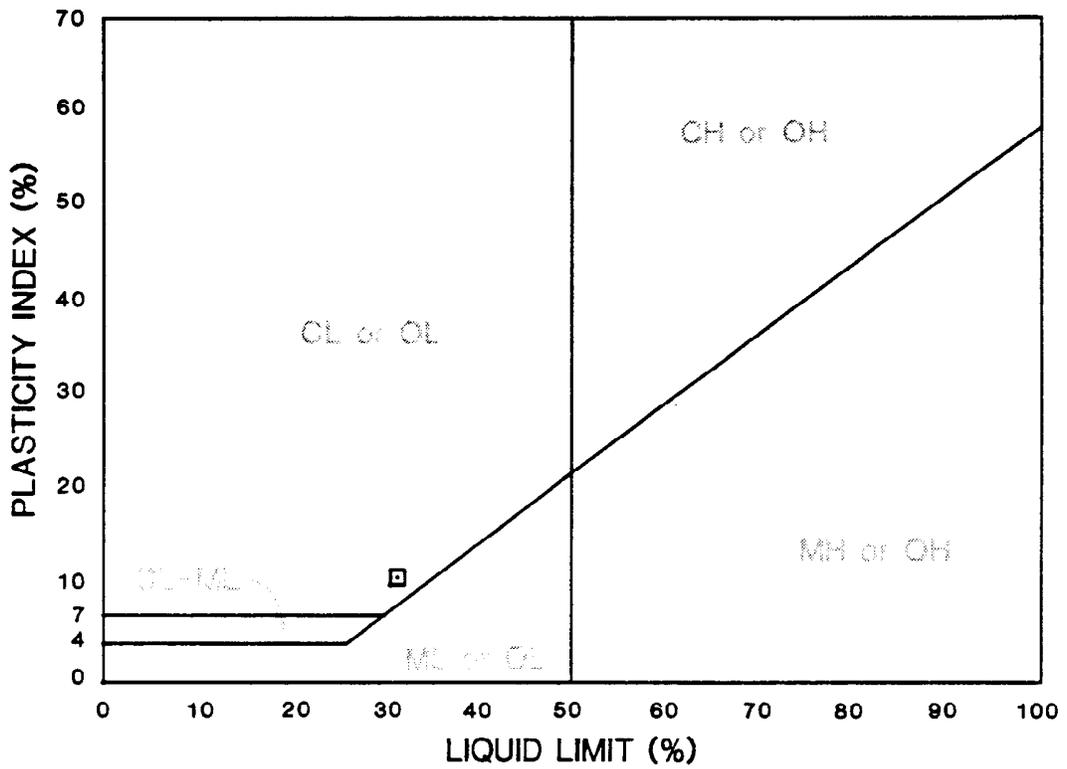
JOE NUMBER
17333,168.11

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DATE
6/92

REVISED

DATE



Reference: ASTM D-4318

SYMBOL	BORING NUMBER	DEPTH (feet)	CLASSIFICATION	LL (%)	PL (%)	PI (%)	MOISTURE CONTENT (%)
☐	MW-02	41.5	BROWN LEAN CLAY W/SAND (CL)	31	20	11	18.4

MCK0003013



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Plasticity Chart

McKesson Corporation Property
Santa Fe Springs, California

J12

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JOB NUMBER
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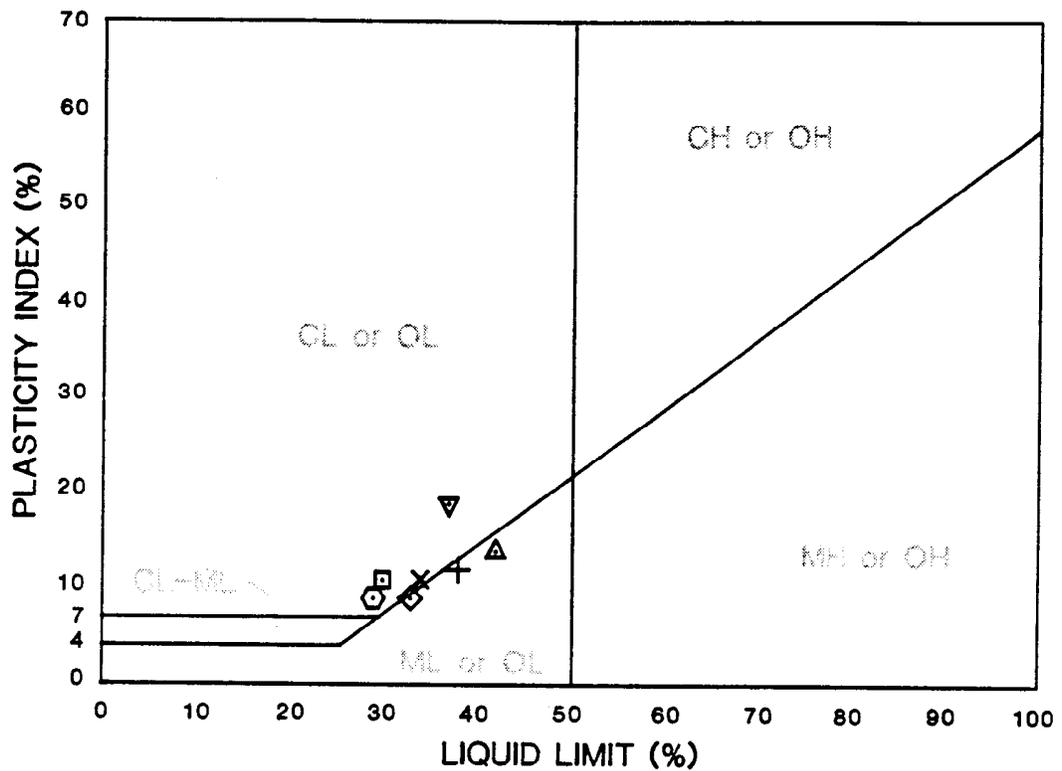
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6/92

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DATE



Reference: ASTM D-4318

SYMBOL	BORING NUMBER	DEPTH (feet)	CLASSIFICATION	LL (%)	PL (%)	PI (%)	MOISTURE CONTENT (%)
□	SB-02	0.5	BROWN SANDY LEAN CLAY (CL)	30	19	11	10.6
△	SB-02	30.5	BROWN SILT (ML)	42	28	14	27.3
▽	SB-10	36.0	BROWN SANDY LEAN CLAY (CL)	37	18	19	14.6
◇	SB-11	25.5	BROWN SILT (ML)	33	24	9	21.5
+	SB-11	40.5	BROWN SILT W/SAND (ML)	38	26	12	22.1
⊙	SB-12	25.0	BROWN SANDY LEAN CLAY (CL)	29	20	9	14.3
X	SB-12	30.0	BROWN LEAN CLAY W/SAND (CL)	34	23	11	23.2



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Plasticity Chart

McKesson Corporation Property
Santa Fe Springs, California

MCK0003014

J13

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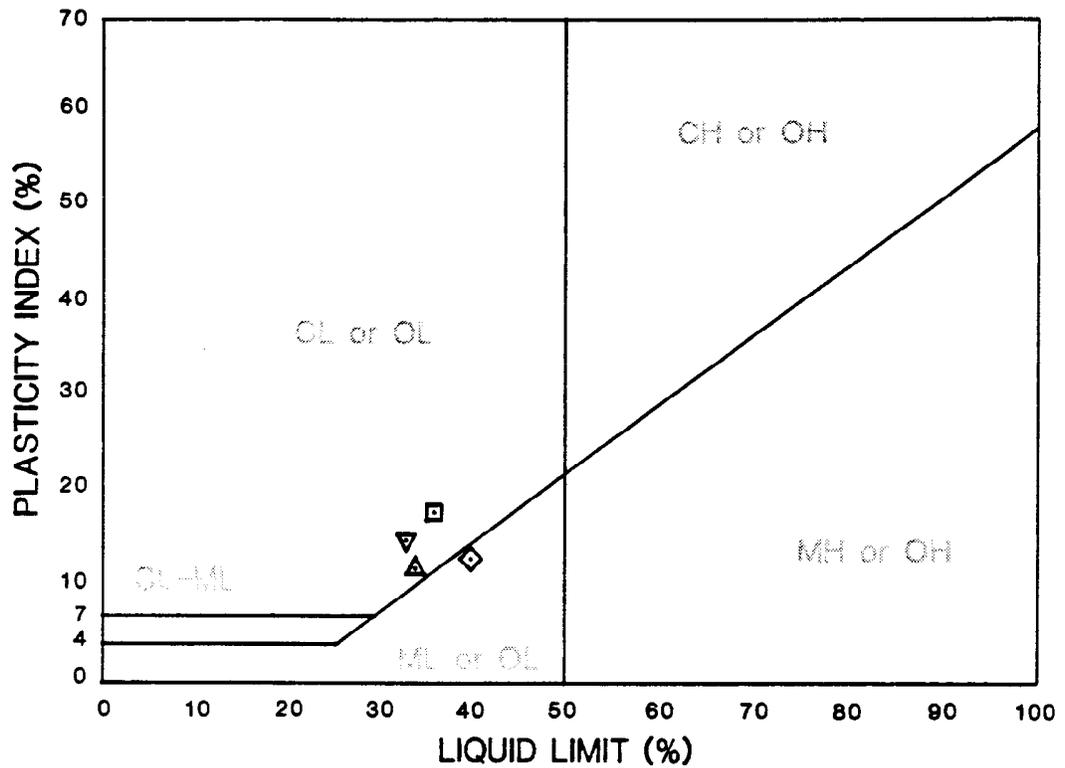
JOB NUMBER
17333,168.11

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DATE
6/92

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DATE



Reference: ASTM D-4318

SYMBOL	BORING NUMBER	DEPTH (feet)	CLASSIFICATION	LL (%)	PL (%)	PI (%)	MOISTURE CONTENT (%)
□	SB-13	35.5	BROWN LEAN CLAY W/SAND (CL)	36	18	18	16.7
△	SB-14	5.5	BROWN LEAN CLAY W/SAND (CL)	34	22	12	20.6
▽	SB-14	35.5	BROWN SANDY LEAN CLAY (CL)	33	18	15	13.9
◇	SB-19	30.5	BROWN SILT (ML)	40	27	13	27.5

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Plasticity Chart

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J14

DRAWN

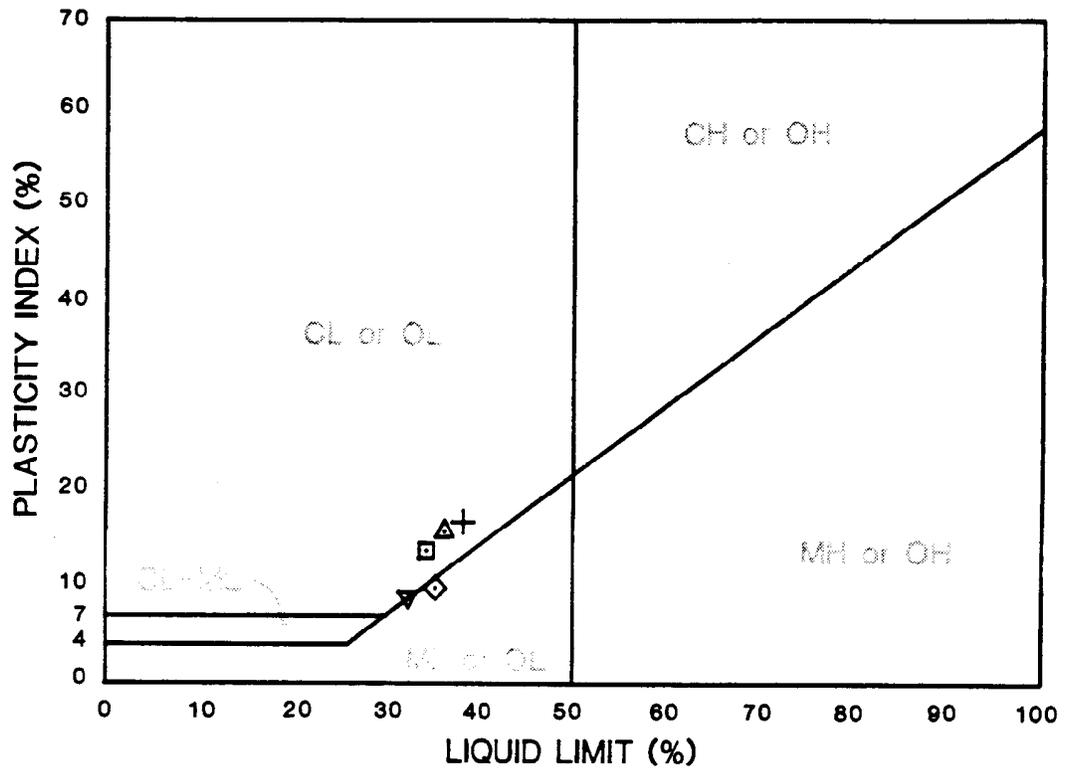
JOB NUMBER
17333,168.11

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DATE
6/82

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DATE



Reference: ASTM D-4318

SYMBOL	BORING NUMBER	DEPTH (feet)	CLASSIFICATION	LL (%)	PL (%)	PI (%)	MOISTURE CONTENT (%)
□	MK-SB-09	25.5	BROWN CLAYEY SAND (SC)	34	20	14	12.3
△	MK-SB-09	36.0	BROWN LEAN CLAY W/SAND (CL)	36	20	16	16.9
▽	MK-SB-15	30.5	BROWN LEAN CLAY (CL)	32	23	9	25.5
◇	MK-SB-32	25.5	BROWN SILT W/SAND (ML)	35	25	10	19.4
⊕	MK-SB-32	40.5	BROWN LEAN CLAY W/SAND (CL)	38	21	17	19.3

MCK0003016



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Plasticity Chart

PLATE

McKesson Corporation Property
Santa Fe Springs, California

J15

DRAWN

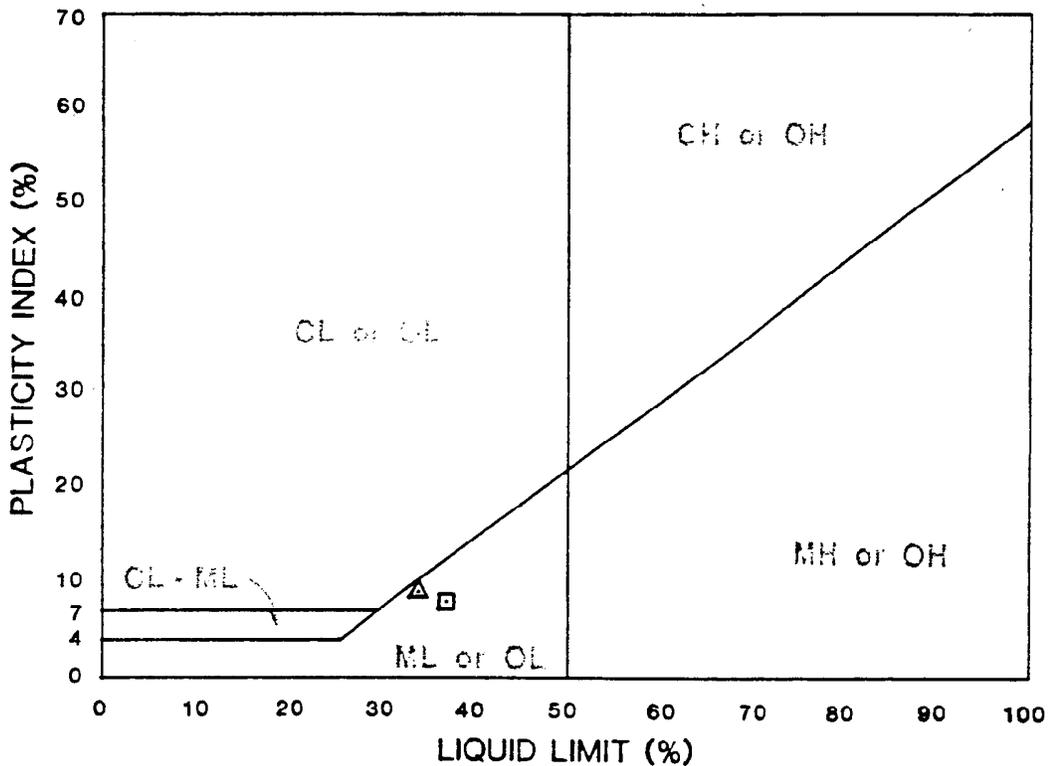
JOB NUMBER
17333,168.11

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THK

DATE
4/92

REVISED

DATE



Reference: ASTM D-4318

SYMBOL	BORING NUMBER	DEPTH (feet)	CLASSIFICATION	LL (%)	PL (%)	PI (%)	MOISTURE CONTENT (%)
□	MKSB-17A	124.0	BROWN SILT W/SAND (ML)	37	29	8	29.0
△	MKSB-17A	117.5	BROWN SILT W/SAND (ML)	34	25	9	27.2

MCK0003017



Harding Lawson Associates
Engineering and Environmental Services

Plasticity Chart

**McKesson Corporation Property
Santa Fe Springs, California**

J16

DRAWN

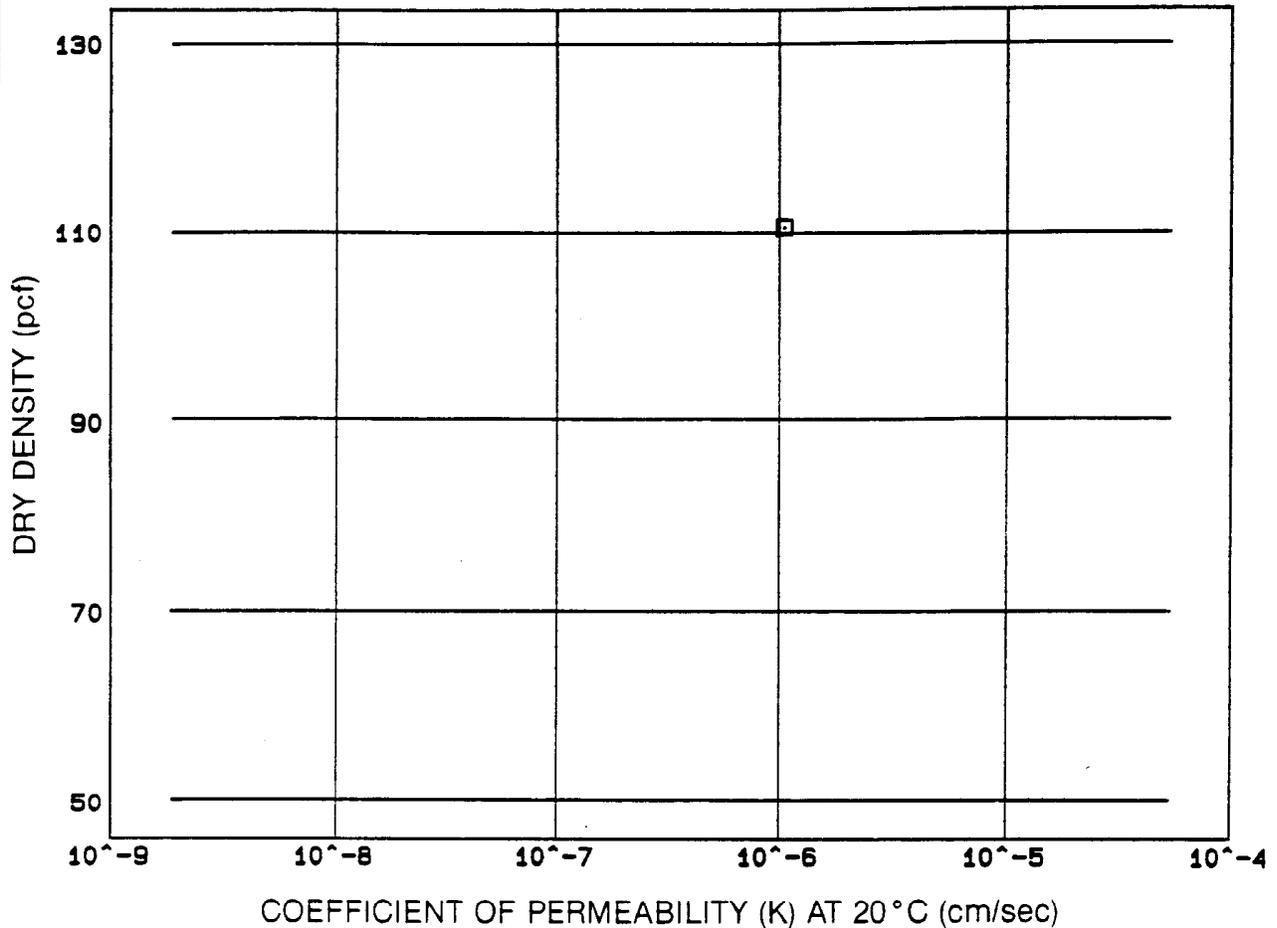
JOB NUMBER
17333,168.11

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THL

DATE
6/92

REVISED

DATE



COEFFICIENT OF PERMEABILITY (K) AT 20°C (cm/sec)

PHYSICAL CONDITIONS		TEST NO		
		A	B	C
INITIAL	Diameter (in)	2.39		
	Height (in)	2.00		
	Water Content (%)	18.4		
	Dry Density (pcf)	107		
	Void Ratio	0.583		
	Saturation (%)	86		
	Consolidation Pressure (psf)	576		
FINAL	Water Content (%)	19.7		
	Dry Density (pcf)	111		
	Void Ratio	0.535		
	Saturation (%)	100		
	Permeability At 20°C (cm/sec)	1.02×10^{-6}		
Sample Source: <input checked="" type="checkbox"/> MW-02 @ 41.5 FT				
Classification: <input checked="" type="checkbox"/> BROWN LEAN CLAY W/SAND CL				

TEST TYPE: FALLING HEAD
SATURATION
METHOD: BACK PRESSURE

MCK0003018



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

Permeability Test Report

McKesson Corporation Property
Santa Fe Springs, California

PI ATF

J17

DRAWN

17333,168.11

APPROVED

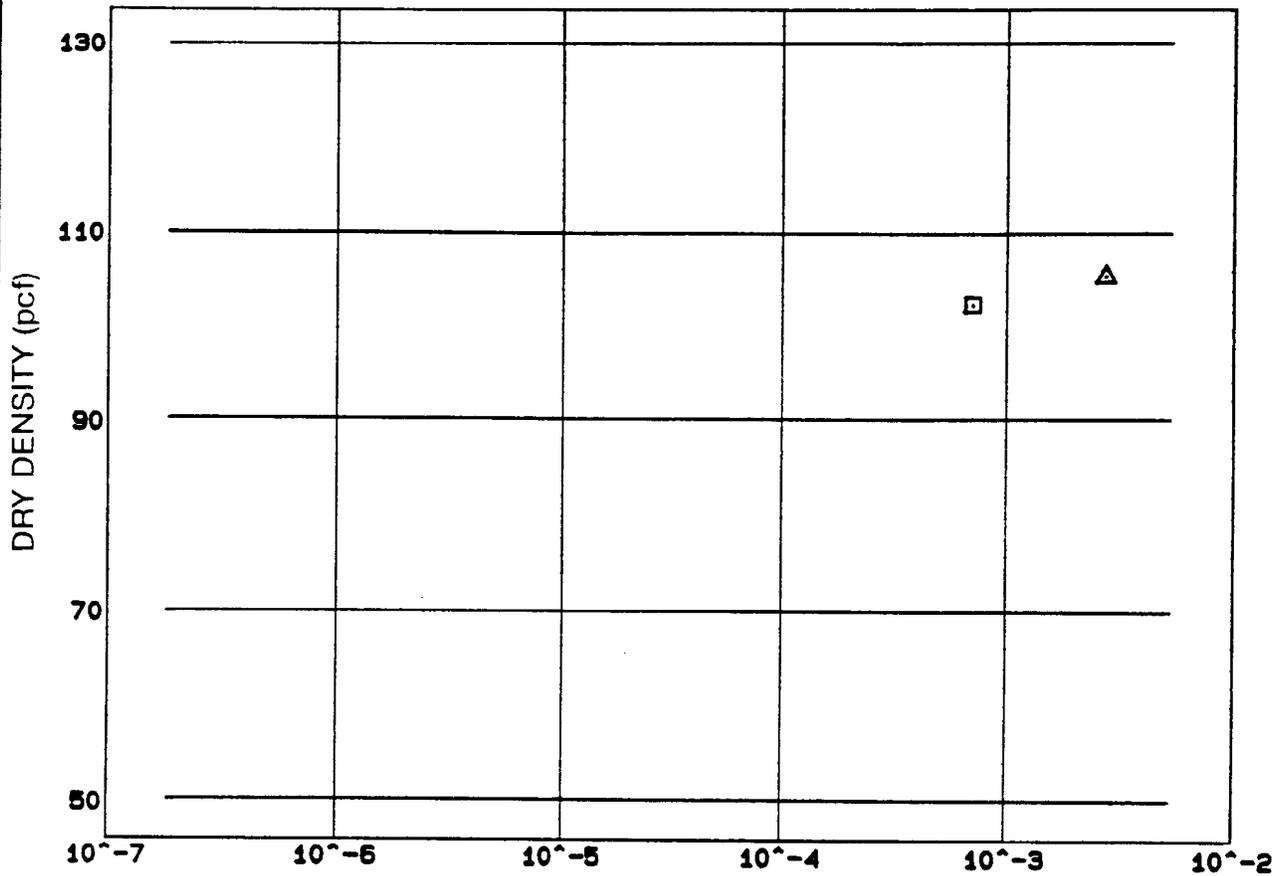
TAK

DATE

6/92

REV. SEC.

DATE



COEFFICIENT OF PERMEABILITY (K) AT 20°C (cm/sec)

PHYSICAL CONDITIONS		TEST NO		
		A □	B △	C
INITIAL	Diameter (in)	2.43	2.43	
	Height (in)	2.00	3.20	
	Water Content (%)	22.4	21.2	
	Dry Density (pcf)	102	106	
	Void Ratio	0.663	0.597	
	Saturation (%)	92	96	
FINAL	Consolidation Pressure (psf)	576	576	
	Water Content (%)	24.0	22.1	
	Dry Density (pcf)	103	106	
	Void Ratio	0.652	0.600	
	Saturation (%)	100	100	
Permeability At 20°C (cm/sec)		6.68 E-4	2.59 E-3	
Sample Source:		□ SB-13 @ 56.0 FT △ SB-04 @ 55.5 FT		
Classification:		□ BROWN SILTY SAND (SM) △ BROWN SAND (SP)		

TEST TYPE: **FALLING HEAD**
SATURATION
METHOD: **BACK PRESSURE**

MCK0003019

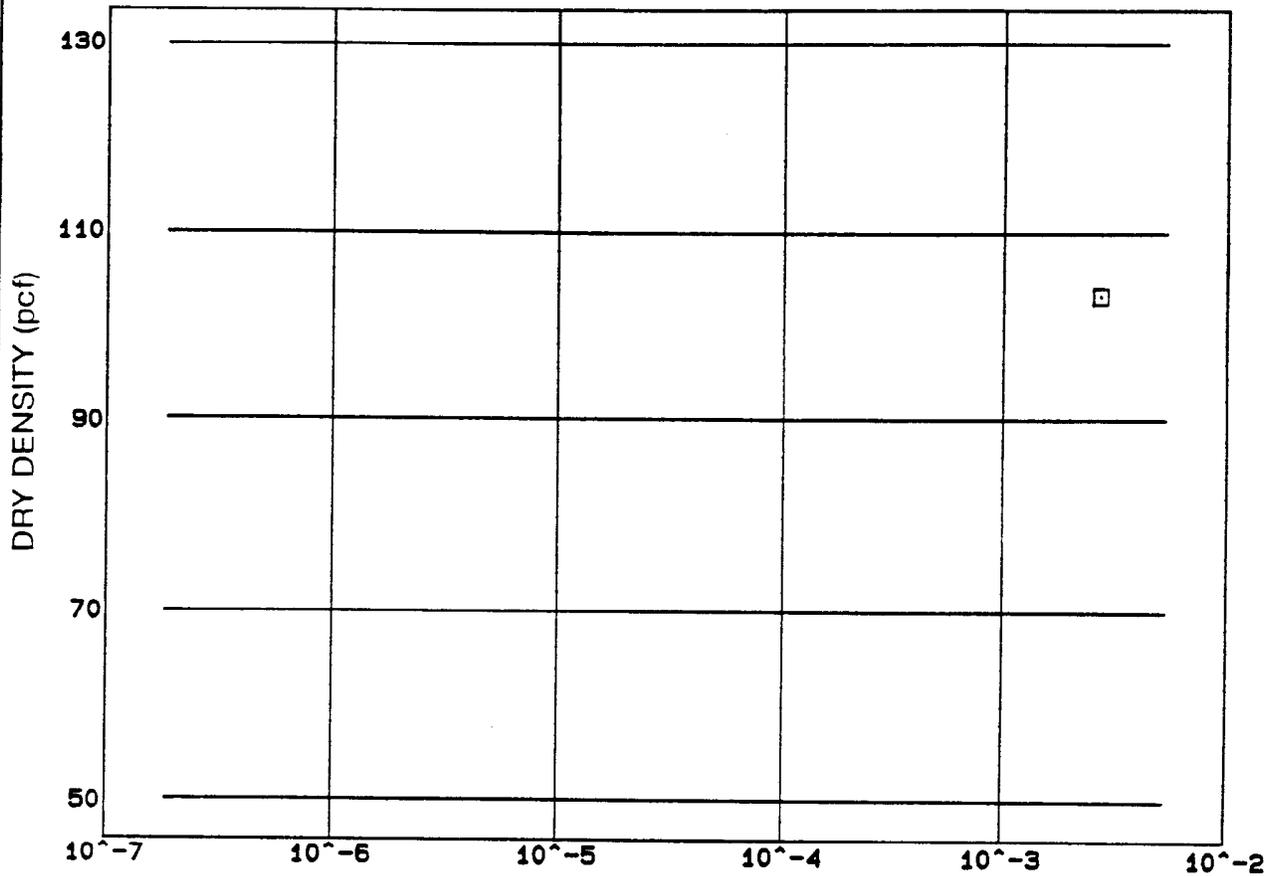


Harding Lawson Associates
Engineers Geologists
& Geophysicists

Permeability Test Report
McKesson Corporation Property
Santa Fe Springs, California

PLATE

J18



COEFFICIENT OF PERMEABILITY (K) AT 20°C (cm/sec)

PHYSICAL CONDITIONS		TEST NO		
		A <input checked="" type="checkbox"/>	B	C
INITIAL	Diameter (in)	2.43		
	Height (in)	2.00		
	Water Content (%)	9.4		
	Dry Density (pcf)	101		
	Void Ratio	0.653		
	Saturation (%)	38		
FINAL	Consolidation Pressure (psf)	576		
	Water Content (%)	23.0		
	Dry Density (pcf)	104		
	Void Ratio	0.616		
	Saturation (%)	100		
Permeability At 20°C (cm/sec)		2.54 E-3		
Sample Source: <input checked="" type="checkbox"/> MK-SB-6 @ 25.5 FT				
Classification: <input checked="" type="checkbox"/> BROWN SAND W/SILT (SP-SM)				

TEST TYPE: FALLING HEAD
SATURATION
METHOD: BACK PRESSURE

MCK0003020



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& Geophysicists

Permeability Test Report

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J19

DRAWN

JOB NUMBER
17333,168.11

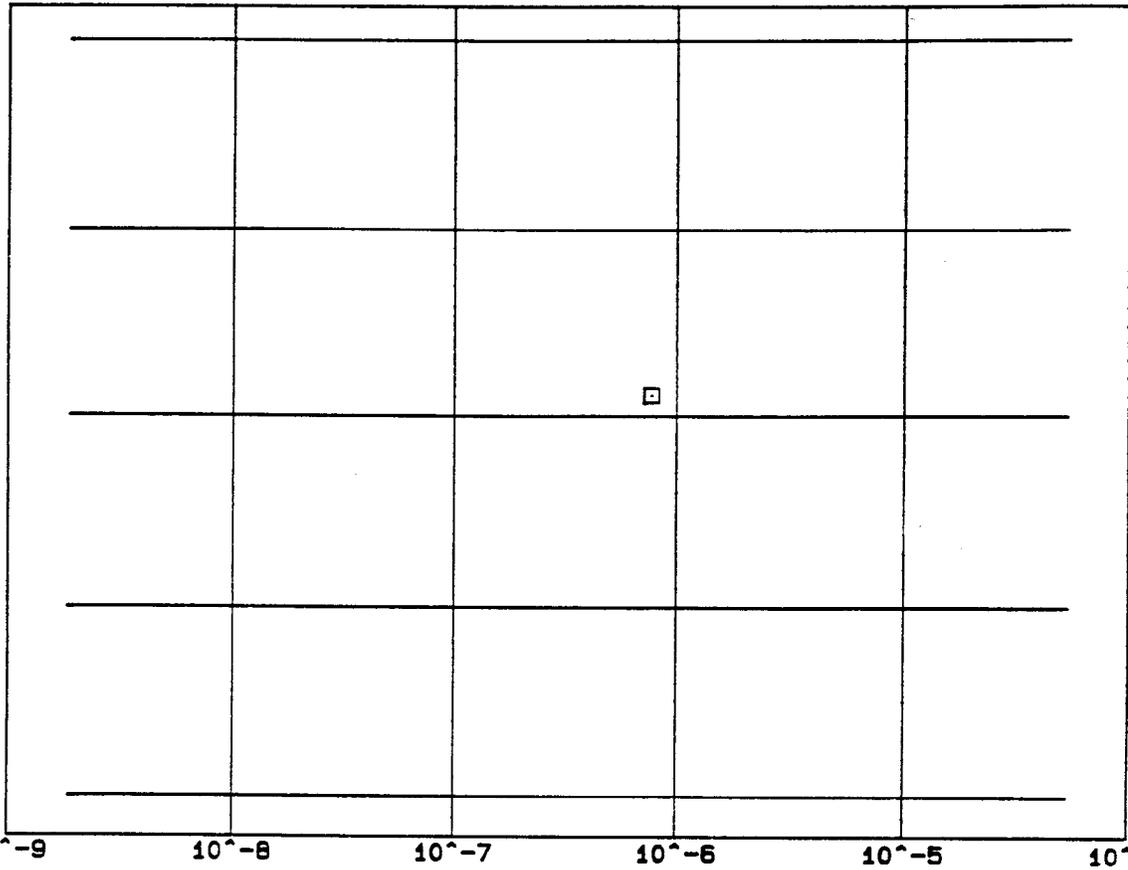
APPROVED
TAK

DATE
6/92

REVISED

DATE

DRY DENSITY (pcf)



COEFFICIENT OF PERMEABILITY (K) AT 20°C (cm/sec)

PHYSICAL CONDITIONS		TEST NO		
		A	B	C
INITIAL	Diameter (in)	2.43		
	Height (in)	2.00		
	Water Content (%)	28.8		
	Dry Density (pcf)	94		
	Void Ratio	0.807		
	Saturation (%)	97		
FINAL	Consolidation Pressure (psf)	576		
	Water Content (%)	30.7		
	Dry Density (pcf)	92		
	Void Ratio	0.836		
	Saturation (%)	100		
Permeability At 20°C (cm/sec)		7.30 E-7		
Sample Source:		MK-SB-6 @ 30.5 FT		
Classification:		BROWN SILT (ML)		

TEST TYPE: FALLING HEAD
SATURATION
METHOD: BACK PRESSURE

MCK0003021



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Permeability Test Report

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J20

DRAWN

17333,168.11

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TAK

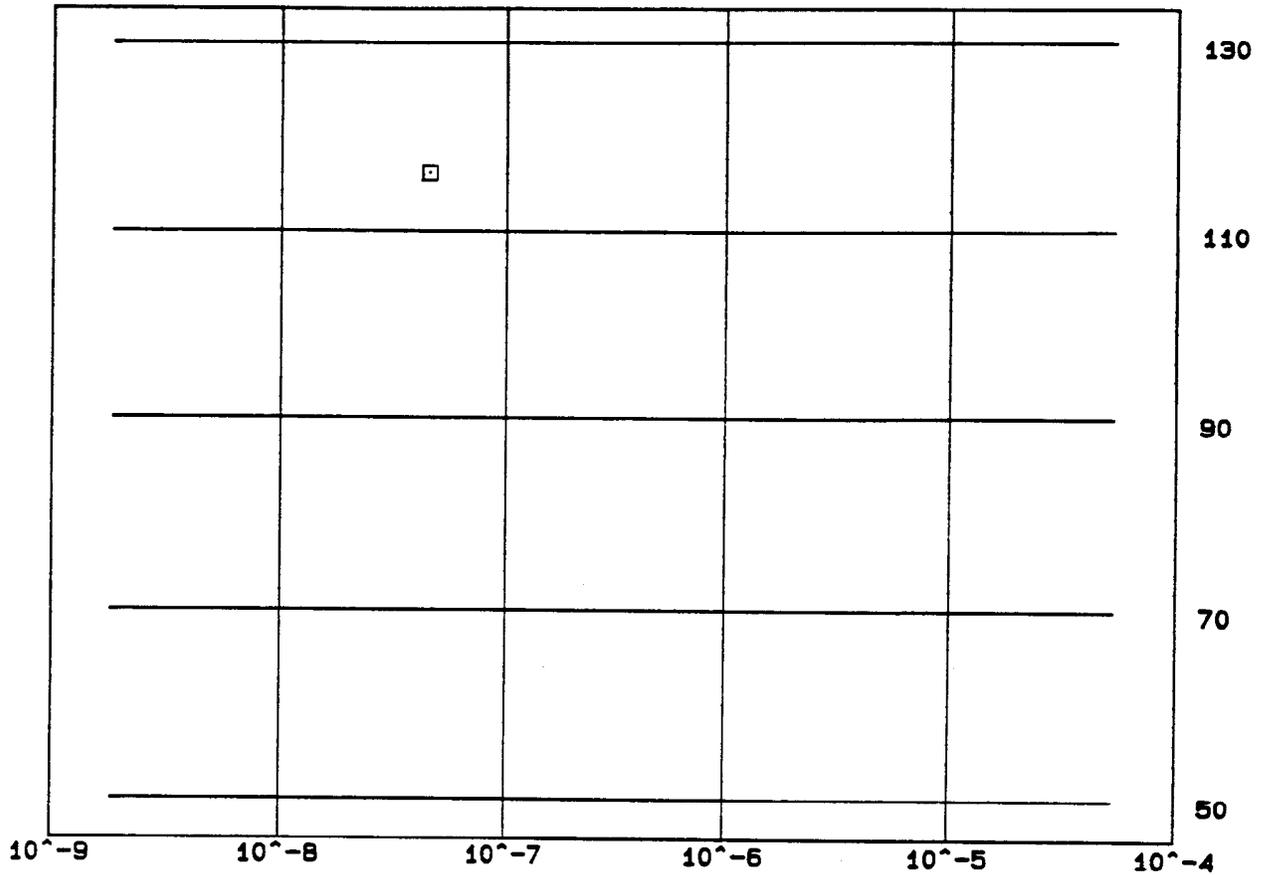
DATE

6/92

REVISED

DATE

DRY DENSITY (pcf)



COEFFICIENT OF PERMEABILITY (K) AT 20°C (cm/sec)

PHYSICAL CONDITIONS		TEST NO		
		A <input checked="" type="checkbox"/>	B	C
INITIAL	Diameter (in)	2.43		
	Height (in)	2.00		
	Water Content (%)	15.9		
	Dry Density (pcf)	116		
	Void Ratio	0.469		
	Saturation (%)	93		
FINAL	Consolidation Pressure (psf)	576		
	Water Content (%)	17.3		
	Dry Density (pcf)	116		
	Void Ratio	0.474		
	Saturation (%)	100		
Permeability At 20°C (cm/sec)		4.20 E-8		
Sample Source:		<input checked="" type="checkbox"/> MK-SB-9 @ 35.5 FT		
Classification:		<input checked="" type="checkbox"/> BROWN SANDY LEAN CLAY (CL)		

TEST TYPE: FALLING HEAD
SATURATION
METHOD: BACK PRESSURE

MCK0003022



Harding Lawson Associates
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& Geophysicists

Permeability Test Report

McKesson Corporation Property
Santa Fe Springs, California

PLATE

J21

DRAWN

17333,168.11

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TAK

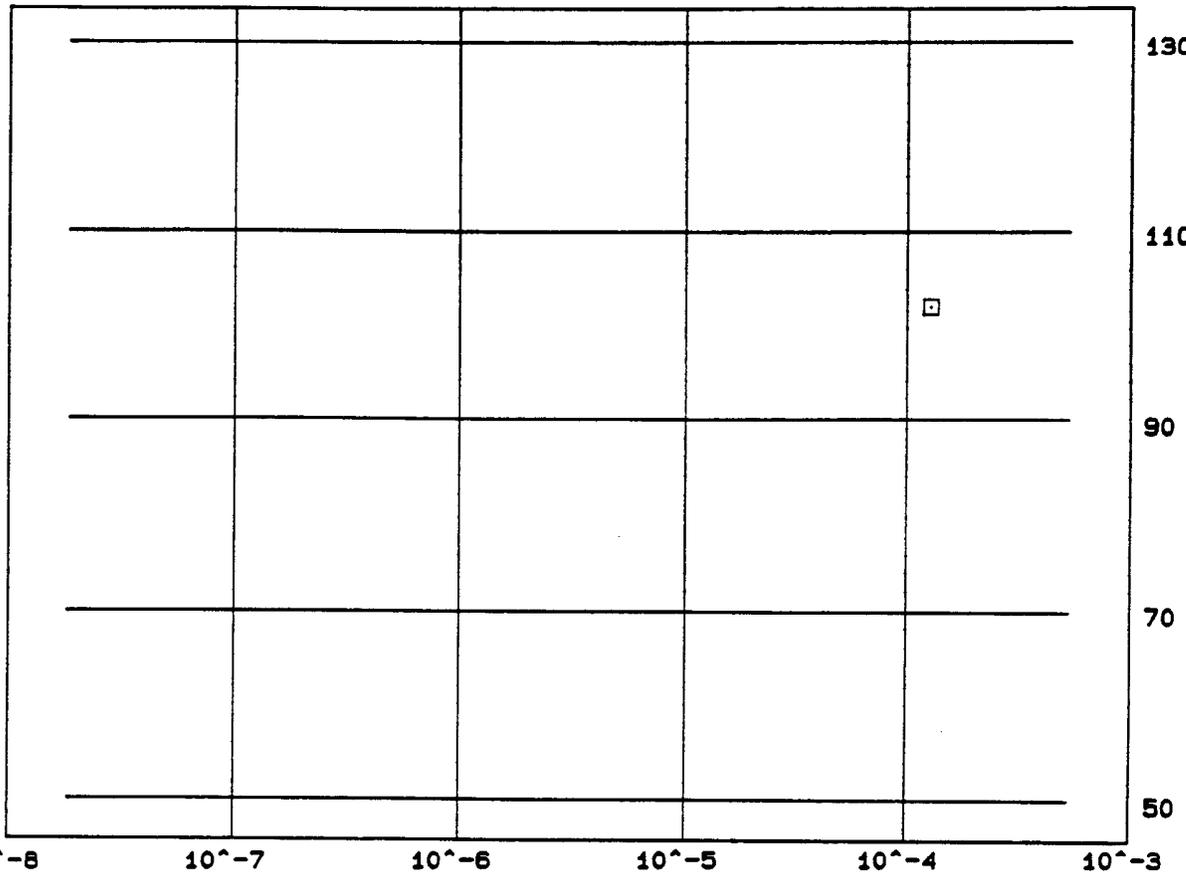
DATE

6/82

REVISED

DATE

DRY DENSITY (pcf)



COEFFICIENT OF PERMEABILITY (K) AT 20°C (cm/sec)

PHYSICAL CONDITIONS		TEST NO		
		A <input checked="" type="checkbox"/>	B	C
INITIAL	Diameter (in)	2.43		
	Height (in)	2.00		
	Water Content (%)	13.7		
	Dry Density (pcf)	95		
	Void Ratio	0.800		
	Saturation (%)	47		
FINAL	Consolidation Pressure (psf)	576		
	Water Content (%)	24.3		
	Dry Density (pcf)	102		
	Void Ratio	0.663		
	Saturation (%)	100		
Permeability At 20°C (cm/sec)		1.36×10^{-4}		
Sample Source: <input checked="" type="checkbox"/> MK-SB-15 @ 20.5 FT				
Classification: <input checked="" type="checkbox"/> BROWN SILTY SAND (SM)				

TEST TYPE: FALLING HEAD
SATURATION
METHOD: BACK PRESSURE

MCK0003023



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

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McKesson Corporation Property
Santa Fe Springs, California

PLATE

J22

DRAWN:

JOB NUMBER
17333,168.11

APPROVED
TRK

DATE
6/92

REVISED

DATE

APPENDIX K
ANALYTICAL RESULTS - SOIL

MCK0003025



Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

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341

ATI I.D. 006240

July 18, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

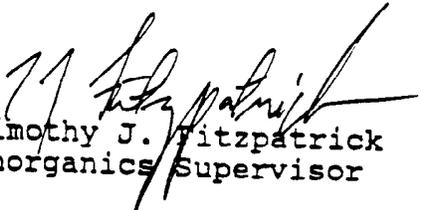
Project Name: McKesson SfeS

Project No.: 17333,157.11

Attention: Burton Chadwick

On June 13, 1990, Analytical Technologies, Inc. received six soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nm


for Richard M. Amano
Laboratory Manager

MCK0003026



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON Sfes

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
PH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003027



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
ATI I.D. : 006240

DATE RECEIVED : 06/13/90
REPORT DATE : 07/18/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-MW-01-23.0	SOIL	06/12/90
02	MK-MW-01-42.0	SOIL	06/12/90
03	MK-MW-02-23.0	SOIL	06/12/90
04	MK-MW-02-45.5	SOIL	06/12/90
05	MK-MW-03-23.0	SOIL	06/12/90
06	MK-MW-03-41.0	SOIL	06/12/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003028



ATI I.D. : 006240

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

DATE RECEIVED : 06/13/90

REPORT DATE : 07/18/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/KG	<20	<20	<20	<20	<20
FLUORIDE	MG/KG	19	5	<5	<5	<5
NITRATE AS NITROGEN	MG/KG	0.70	1.2	0.50	6.6	1.0
PETROLEUM HYDROCARBONS, IR	MG/KG	<1	2	<1	1	<1
PH	UNITS	8.2	8.4	8.9	8.0	8.1
SULFATE	MG/KG	<100	<100	<100	<100	<100



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 006240

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

DATE RECEIVED : 06/13/90

REPORT DATE : 07/18/90

PARAMETER	UNITS	06
CHLORIDE	MG/KG	<20
FLUORIDE	MG/KG	15
NITRATE AS NITROGEN	MG/KG	0.70
PETROLEUM HYDROCARBONS, IR	MG/KG	7
PH	UNITS	7.7
SULFATE	MG/KG	<100

MCK0003030



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes

ATI I.D. : 006240

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/KG	00624006	<20	<20	0	800	800	100
FLUORIDE	MG/KG	00624006	15	15	0	32	15	71 113%
NITRATE AS NITROGEN	MG/KG	00624005	1.0	1.0	0	2.8	5.0	36 %
PETROLEUM HYDROCARBONS	MG/KG	00624006	7	7	0	106	97	102
PH	UNITS	00626401	8.6	8.6	0	N/A	N/A	N/A
SULFATE	MG/KG	00640001	<100	<100	0	190	200	95

MCK0003031

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



ATI I.D. : 006240

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes

DATE RECEIVED : 06/13/90

REPORT DATE : 07/18/90

PARAMETER	UNITS	01	02	03	04	05
IRON	MG/KG	25200	27600	6780	26200	11700
POTASSIUM	MG/KG	5600	3040	579	2020	1450
MANGANESE	MG/KG	655	640	320	472	189
SODIUM	MG/KG	397	346	222	270	201
ZINC	MG/KG	65.0	65.1	16.9	55.0	27.8

MCK0003032



ATI I.D. : 006240

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

DATE RECEIVED : 06/13/90

REPORT DATE : 07/18/90

PARAMETER	UNITS	06
IRON	MG/KG	23200
POTASSIUM	MG/KG	3780
MANGANESE	MG/KG	676
SODIUM	MG/KG	228
ZINC	MG/KG	50.1

MCK0003033



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

ATI I.D. : 006240

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE, SPIKE CONC, % REC. Rows include IRON, POTASSIUM, MANGANESE, SODIUM, and ZINC.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100

** Due to the necessary dilution of the sample, result was not attainable



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00624001

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SfeS
CLIENT I.D. : MK-MW-01-23.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
DATE RECEIVED : 06/13/90
DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003035



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00624002

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-MW-01-42.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
DATE RECEIVED : 06/13/90
DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003036



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00624003

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-MW-02-23.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
DATE RECEIVED : 06/13/90
DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003037



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00624004

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/12/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/13/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 07/05/90
CLIENT I.D.	: MK-MW-02-45.5	DATE ANALYZED	: 07/06/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00624005

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SfeS
CLIENT I.D. : MK-MW-03-23.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
DATE RECEIVED : 06/13/90
DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003039



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00624006

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-MW-03-41.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
DATE RECEIVED : 06/13/90
DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003040



REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006240
DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003041

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 006240

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 REF I.D. : 00633402

 DATE EXTRACTED : 07/05/90
 DATE ANALYZED : 07/06/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SAMPLE REC.	SAMPLE REC.	
ETHYLENE GLYCOL	<2.0	40.0	18	45	18	45	0
DIETHYLENE GLYCOL	<2.0	20.0	2.6	13	3.2	16	21
PROPYLENE GLYCOL	<2.0	20.0	15	75	16	80	6
HEXYLENE GLYCOL	<2.0	40.0	18	45	18	45	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003042

QUALITY CONTROL DATA

ATI I.D. : 006240

TEST : GLYCOLS

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SfeS
 REF I.D. : REAGENT SOIL

 DATE EXTRACTED : 07/06/90
 DATE ANALYZED : 07/06/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					% SPIKED	% REC.	
ETHYLENE GLYCOL	<2.0	40.0	37	93	N/A	N/A	N/A
DIETHYLENE GLYCOL	<2.0	20.0	18	90	N/A	N/A	N/A
PROPYLENE GLYCOL	<2.0	20.0	20	100	N/A	N/A	N/A
HEXYLENE GLYCOL	<2.0	40.0	37	93	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003043

GCMS - RESULTS

ATI I.D. : 00624001

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SfeS
 CLIENT I.D. : MK-MW-01-23.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/22/90
 DATE ANALYZED : 06/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	80
MB (%)	92
TOLUENE-D8 (%)	92

MCK0003044



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00624001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003045

GCMS - RESULTS
ATI I.D. : 00624002
TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/12/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/13/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 06/22/90
CLIENT I.D.	: MK-MW-01-42.0	DATE ANALYZED	: 06/26/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
2,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	79
... B (%)	96
TOLUENE-D8 (%)	99

MCK0003046



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00624002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003047



ATI I.D. : 00624003

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SfeS
 CLIENT I.D. : MK-MW-02-23.0
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/22/90
 DATE ANALYZED : 06/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	89
TOLUENE-D8 (%)	106
STYRENE-D8 (%)	109

MCK0003048



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-MW-02-23.0
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/22/90
 DATE ANALYZED : 06/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	89
B (%)	106
TOLUENE-D8 (%)	109

MCK0003049



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00624003

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003050



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SfeS
CLIENT I.D. : MK-MW-02-45.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
DATE RECEIVED : 06/13/90
DATE EXTRACTED : 06/22/90
DATE ANALYZED : 06/26/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding concentration results, such as CHLOROMETHANE <0.50, BROMOMETHANE <0.50, etc.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Surrogate Name and Percent Recovery. Includes 1,2-DICHLOROETHANE-D4 (%), BFB (%), and TOLUENE-D8 (%).

MCK0003051



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00624004

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003052

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-MW-03-23.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/22/90
 DATE ANALYZED : 06/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	90
BFB (%)	109
TOLUENE-D8 (%)	107

MCK0003053



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00624005

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003054

GCMS - RESULTS

ATI I.D. : 00624006

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-MW-03-41.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/22/90
 DATE ANALYZED : 06/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	80
BFB (%)	102
TOLUENE-D8 (%)	102

MCK0003055



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00624006

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003056



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006240
 DATE EXTRACTED : 06/22/90
 DATE ANALYZED : 06/25/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	94
BFB (%)	110
TOLUENE-D8 (%)	112

MCK0003057

TR - Compound detected at an unquantifiable trace level



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006240

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003058



QUALITY CONTROL DATA

ATI I.D. : 006240

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 06/22/90
DATE ANALYZED : 06/26/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-MW-01-23.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/19/90
 DATE ANALYZED : 06/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSC-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
1,4-DICHLOROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
1,2,4-TRICHLOROBENZENE	<0.17
1,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003060



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	61
2-FLUOROBIPHENYL (%)	66
TERPHENYL (%)	54
PHENOL-D6 (%)	36
2-FLUOROPHENOL (%)	56
2,4,6-TRIBROMOPHENOL (%)	59

MCK0003061



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00624001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003062



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-MW-01-42.0
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/19/90
 DATE ANALYZED : 06/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003063



BT : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	57
2-FLUOROBIPHENYL (%)	62
TERPHENYL (%)	50
PHENOL-D6 (%)	36
2-FLUOROPHENOL (%)	41
2,4,6-TRIBROMOPHENOL (%)	47

MCK0003064



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00624002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003065

GCMS - RESULTS
ATI I.D. : 00624003
TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/12/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/13/90
PROJECT NAME	: McKESSON SfeS	DATE EXTRACTED	: 06/19/90
CLIENT I.D.	: MK-MW-02-23.0	DATE ANALYZED	: 06/27/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
,4-DINITROPHENOL	<0.85
-NITROPHENOL	<0.85
BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003066

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<1.7
BENZIDINE	<0.17
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.34
3,3-DICHLOROBENZIDINE	<0.17
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	62
2-FLUOROBIPHENYL (%)	68
TERPHENYL (%)	57
PHENOL-D6 (%)	44
2-FLUOROPHENOL (%)	58
2,4,6-TRIBROMOPHENOL (%)	67

MCK0003067



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00624003

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003068



GCMS - RESULTS

ATI I.D. : 00624004

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-MW-02-45.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/12/90
DATE RECEIVED : 06/13/90
DATE EXTRACTED : 06/19/90
DATE ANALYZED : 06/27/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.17.

MCK0003069



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.17
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.85
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<0.17
PYRENE	<1.7
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.17
BENZO(a)ANTHRACENE	<0.34
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	66
2-FLUOROBIPHENYL (%)	72
TERPHENYL (%)	62
PHENOL-D6 (%)	46
2-FLUOROPHENOL (%)	57
2,4,6-TRIBROMOPHENOL (%)	71

MCK0003070



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00624004

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003071

GCMS - RESULTS

ATI I.D. : 00624005

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-MW-03-23.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/19/90
 DATE ANALYZED : 06/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
4-DINITROPHENOL	<0.85
NITROPHENOL	<0.85
BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003072

GCMS - RESULTS

ATI I.D. : 00624006

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-MW-03-41.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/12/90
 DATE RECEIVED : 06/13/90
 DATE EXTRACTED : 06/19/90
 DATE ANALYZED : 06/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.85
2,4,5-TRICHLOROPHENOL	<0.17
2-CHLORONAPHTHALENE	<0.85
2-NITROANILINE	<0.17
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.85
3-NITROANILINE	<0.17
ACENAPHTHENE	<0.85
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.17
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003073

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
1-N-OCTYL PHTHALATE	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	59
2-FLUOROBIPHENYL (%)	62
TERPHENYL (%)	52
PHENOL-D6 (%)	44
2-FLUOROPHENOL (%)	53
2,4,6-TRIBROMOPHENOL (%)	63

MCK0003074



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00624006

UNITS : MG/KG

MATRIX : SOIL

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003075

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 006240
 DATE EXTRACTED : 06/19/90
 DATE ANALYZED : 06/26/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
SOPHORONE	<0.17
NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
METHYLPHTHALATE	<0.17
1-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003076

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<1.7
BENZIDINE	<0.17
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.34
3,3-DICHLOROBENZIDINE	<0.17
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	55
2-FLUOROBIPHENYL (%)	62
TERPHENYL (%)	60
PHENOL-D6 (%)	33
2-FLUOROPHENOL (%)	43
2,4,6-TRIBROMOPHENOL (%)	48

MCK0003077



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006240

UNITS : MG/KG

COMPOUNDS

RESULTS

455 ALIPHATIC HYDROCARBON C6

0.8

791 BRANCHED FURAN

0.2

QUALITY CONTROL DATA

ATI I.D. : 006240

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SfeS
 REF I.D. : REAGENT SOIL

 DATE EXTRACTED : 06/19/90
 DATE ANALYZED : 06/28/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					% SPIKED	% REC.	
1,2,4-TRICHLOROBENZENE	<0.17	3.3	2.9	88	N/A	N/A	N/A
ACENAPHTHENE	<0.17	3.3	2.7	82	N/A	N/A	N/A
2,4-DINITROTOLUENE	<0.17	3.3	2.8	85	N/A	N/A	N/A
PYRENE	<0.17	3.3	3.1	94	N/A	N/A	N/A
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	2.4	73	N/A	N/A	N/A
1,4-DICHLOROBENZENE	<0.17	3.3	2.8	85	N/A	N/A	N/A
PENTACHLOROPHENOL	<0.85	13.2	11.2	85	N/A	N/A	N/A
PHENOL	<0.17	6.6	6.1	92	N/A	N/A	N/A
2-CHLOROPHENOL	<0.17	6.6	7.2	109	N/A	N/A	N/A
4-CHLORO-3-METHYLPHENOL	<0.17	6.6	6.4	97	N/A	N/A	N/A
4-NITROPHENOL	<0.85	13.2	16.5	125	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003079



Analytical **Technologies, Inc.**

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000001

ATI I.D. 006334

July 18, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

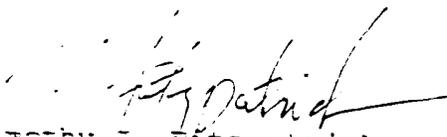
Project Name: McKesson Santa Fe Springs

Project No.: 17333-158.11

Attention: Burton Chadwick

On June 19, 1990, Analytical Technologies, Inc. received two soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor


Richard M. Amano
Laboratory Manager

TJF:bc

MCK0003080

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: McKESSON SANTA FE SPRINGS

PROJECT NO.: 17333-158.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
pH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003081



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 006334

DATE RECEIVED : 06/19/90

REPORT DATE : 07/18/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-1-36.0-36.5	SOIL	06/18/90
02	MK-SB-1-41.0-41.5	SOIL	06/18/90

----- TOTALS -----

MATRIX	=	SAMPLES
-----		-----
SOIL		2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003082



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 006334

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 06/19/90

REPORT DATE : 07/18/90

PARAMETER	UNITS	01	02
CHLORIDE	MG/KG	<20	<20
FLUORIDE	MG/KG	<5	<5
NITRATE AS NITROGEN	MG/KG	15.3	50.7
PETROLEUM HYDROCARBONS, IR	MG/KG	3	2
PH	UNITS	8.7	8.2
SULFATE	MG/KG	<100	<100

MCK0003083



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333-157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 006334

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/KG	00624006	<20	<20	0	800	800	100
FLUORIDE	MG/KG	00624006	15	15	0	32	15	71
NITRATE AS NITROGEN	MG/KG	00633402	50.7	38.9	26	**	**	**
PETROLEUM HYDROCARBONS	MG/KG	00632201	9	8	11	126	112	104
PH	UNITS	00635904	9.0	8.9	1	N/A	N/A	N/A
SULFATE	MG/KG	00640001	<100	<100	0	190	200	95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable

MCK0003084



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 006334

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 06/19/90

REPORT DATE : 07/18/90

PARAMETER	UNITS	01	02
IRON	MG/KG	18450	29780
MANGANESE	MG/KG	329	418
ZINC	MG/KG	48.7	63.3

MCK0003085



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 006334

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
IRON	MG/KG	00635904	11200	11600	4	**	**	**
MANGANESE	MG/KG	00635904	143	161	12	247	97.4	98
ZINC	MG/KG	00635904	29.7	28.3	5	77.1	48.7	99

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable



Analytical Technologies, Inc

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00633401

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-1-36.0-36.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/18/90
DATE RECEIVED : 06/19/90
DATE EXTRACTED : 06/26/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003087



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00633402

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/18/90
PROJECT #	: 17333-157.11	DATE RECEIVED	: 06/19/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 06/26/90
CLIENT I.D.	: MK-SB-1-41.0-41.5	DATE ANALYZED	: 07/06/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0



REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006334
DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003089



QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 006334

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
REF I.D. : 00633402

DATE EXTRACTED : 07/05/90
DATE ANALYZED : 07/06/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SAMPLE CONC. SPIKED, SPIKED % SAMPLE REC., DUP. SPIKED %, DUP. SPIKED %, RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100



QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 006334

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
REF I.D. : 00629101

DATE EXTRACTED : 06/22/90
DATE ANALYZED : 06/28/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE REC., DUP. % SPIKED, DUP. % SPIKED, RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003091

ATI I.D. : 00633401

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333-157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-1-36.0-36.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/18/90
 DATE RECEIVED : 06/19/90
 DATE EXTRACTED : 06/27/90
 DATE ANALYZED : 06/29/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
NITROSC-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
1-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
LICENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003092

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
D,N-OCTYLPHTHALATE	<0.17
B,LO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	65
2-FLUOROBIPHENYL (%)	66
TERPHENYL (%)	52
PHENOL-D6 (%)	50
2-FLUOROPHENOL (%)	47
2,4,6-TRIBROMOPHENOL (%)	92

MCK0003093



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

T : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

MATRIX : SOIL

ATI I.D. : 00633401

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003094

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333-157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-1-41.0-41.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/18/90
 DATE RECEIVED : 06/19/90
 DATE EXTRACTED : 06/27/90
 DATE ANALYZED : 06/29/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-TROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003095



ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
1-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	69
2-FLUOROBIPHENYL (%)	63
TERPHENYL (%)	54
PHENOL-D6 (%)	56
2-FLUOROPHENOL (%)	54
2,4,6-TRIBROMOPHENOL (%)	97

MCK0003096



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

1 : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00633402

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003097

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333-157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 006334
 DATE EXTRACTED : 06/27/90
 DATE ANALYZED : 06/29/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS (2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS (2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS (2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
1-DINITROTOLUENE	<0.17
1-METHYLPHthalate	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003098



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	78
2-FLUOROBIPHENYL (%)	78
TERPHENYL (%)	54
PHENOL-D6 (%)	60
2-FLUOROPHENOL (%)	57
2,4,6-TRIBROMOPHENOL (%)	102

MCK0003099



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006334

UNITS : MG/KG

COMPOUNDS	RESULTS
420 ALIPHATIC HYDROCARBON C6	0.9
1800 DIOCTYL ESTER HEXANEDIOIC ACID	0.4

MCK0003100

QUALITY CONTROL DATA

ATI I.D. : 006334

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333-157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : 00628816

 DATE EXTRACTED : 06/27/90
 DATE ANALYZED : 07/09/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<0.85	3.3	3.2	97	2.8	84	14
ACENAPHTHENE	18	3.3	18	*	17.5	*	3
2,4-DINITROTOLUENE	<0.85	3.3	2.4	71	2.4	72	1
PYRENE	2.6	3.3	4.6	61	5.4	83	30
N-NITROSO-DI-N-PROPYLAMINE	<0.85	3.3	2.4	73	2.3	71	3
1,4-DICHLOROBENZENE	<0.85	3.3	2.5	77	2.3	68	12
PENTACHLOROPHENOL	<4.2	13.2	12.1	92	11.2	85	8
PHENOL	<0.85	6.6	3.6	55	3.5	53	4
2-CHLOROPHENOL	<0.85	6.6	6.1	93	5.7	86	8
4-CHLORO-3-METHYLPHENOL	<0.85	6.6	7.3	112	6.1	92	10
4-NITROPHENOL	<4.2	13.2	17.9	136	17.5	132	3

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to sample matrix interference

MCK0003101

CHAIN OF CUSTODY FORM

Job Number: 17333-158-11

Samplers: Dan Johnson

Name/Location: McKesson Seals & Signs

Project Manager: Burton Chidwick

Recorder: [Signature]
 (Signature Required)

Lab: ATF

ANALYSIS REQUESTED	
EPA 601/8010	
EPA 602/8020	
EPA 624/8240	
EPA 625/8270	
ICP METALS	
EPA 8015M/TPH	

STATION DESCRIPTION/ NOTES
MK-353-1 - 11/12/10
MK-353-1 - 11/22/10

SOURCE CODE	MATRIX	CONTAINERS & PRESERV		SAMPLE NUMBER OR LAB NUMBER			DATE			
		Unpres.	H ₂ O ₂	Yr	Wk	Seq	Yr	Mo	Dy	Time
40	Water	X	X				10	06	13	AM
40	Sediment	X	X				10	06	13	AM
	Soil									
	Oil									

LAB NUMBER		DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
Yr	Seq				

MCK0003102

CHAIN OF CUSTODY RECORD			
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT			



COO:075

ATI I.D. 006400

3.4.1

July 20, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

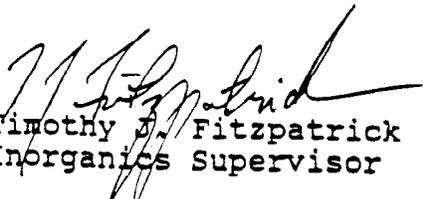
Project Name: McKesson SfeS

Project No.: 17333,157.11

Attention: Burton Chadwick

On June 25, 1990, Analytical Technologies, Inc. received fifteen soil and two water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nm


For: Richard M. Amano
Laboratory Manager

MCK0003103

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON Sfes

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
PH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003104



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
ATI I.D. : 006400

DATE RECEIVED : 06/25/90
REPORT DATE : 07/20/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-02-20.5-21	SOIL	06/19/90
02	MK-SB-02-41-41.5	SOIL	06/19/90
03	MK-SB-12-20-20.5	SOIL	06/20/90
04	MK-SB-12-30.5-31	SOIL	06/20/90
05	MK-SB-12-41-41.5	SOIL	06/20/90
06	MK-SB-15-26-26.5	SOIL	06/21/90
07	MK-SB-15-41-41.5	SOIL	06/21/90
08	MK-SB-14-26-26.5	SOIL	06/21/90
09	MK-SB-14-41-41.5	SOIL	06/21/90
10	MK-SB-11-26-26.5	SOIL	06/22/90
11	MK-SB-11-41-41.5	SOIL	06/22/90
12	MK-SB-10-30.5-31	SOIL	06/22/90
13	MK-SB-10-46-46.5	SOIL	06/22/90
14	MK-SB-13-25.5-26	SOIL	06/20/90
15	MK-SB-13-41-41.5	SOIL	06/20/90
16	MK-SW-01-62390	WATER	06/23/90
17	MK-SW-02-62390	WATER	06/23/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	2
SOIL	15

MCK0003105

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

DATE RECEIVED : 06/25/90

REPORT DATE : 07/20/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/KG	100	<20	<20	<20	<20
FLUORIDE	MG/KG	<5	<5	<5	<5	<5
NITRATE AS NITROGEN	MG/KG	<2.6	<2.6	<2.6	<2.6	<2.6
PETROLEUM HYDROCARBONS, IR	MG/KG	<1	1	2	<1	<1
PH	UNITS	7.7	7.6	7.7	7.9	7.9
SULFATE	MG/KG	<100	<100	<100	<100	<100

MCK0003106



ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes

DATE RECEIVED : 06/25/90

REPORT DATE : 07/20/90

PARAMETER	UNITS	06	07	08	09	10
CHLORIDE	MG/KG	<20	<20	<20	<20	<20
FLUORIDE	MG/KG	<5	<5	8	8	<5
NITRATE AS NITROGEN	MG/KG	<2.6	<2.6	<2.6	<2.6	<2.6
PETROLEUM HYDROCARBONS, IR	MG/KG	1	<1	<1	<1	<1
PH	UNITS	7.4	7.7	8.0	8.1	7.9
SULFATE	MG/KG	172	<100	<100	<100	<100

MCK0003107



ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

DATE RECEIVED : 06/25/90

REPORT DATE : 07/20/90

PARAMETER	UNITS	11	12	13	14	15
CHLORIDE	MG/KG	<20	100	<20	-	-
FLUORIDE	MG/KG	<5	13	<5	-	-
NITRATE AS NITROGEN	MG/KG	<2.6	8.4	<2.6	-	-
PETROLEUM HYDROCARBONS, IR	MG/KG	<1	<1	1	<1	2
PH	UNITS	7.9	7.7	7.6	-	-
SULFATE	MG/KG	<100	257	<100	-	-

MCK0003108



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes

ATI I.D. : 006400

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/KG	00640008	<20	<20	0	800	800	100
CHLORIDE	MG/KG	00640013	<20	<20	0	800	800	100
FLUORIDE	MG/KG	00640009	8	8	0	47	48	81
NITRATE AS NITROGEN	MG/KG	00640010	<2.6	<2.6	0	5.6	5.2	93
NITRATE AS NITROGEN	MG/KG	00640013	<2.6	<2.6	0	4.1	5.1	80
PETROLEUM HYDROCARBONS	MG/KG	00640003	2	3	40	110	101	106
PETROLEUM HYDROCARBONS	MG/KG	00640013	1	1	0	120	104	114
PH	UNITS	00640013	7.6	7.5	1	N/A	N/A	N/A
PH	UNITS	00649702	7.9	8.0	1	N/A	N/A	N/A
SULFATE	MG/KG	00640001	<100	<100	0	190	200	95
SULFATE	MG/KG	00640009	<100	<100	0	239	200	120

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

DATE RECEIVED : 06/25/90

REPORT DATE : 07/20/90

PARAMETER	UNITS	01	02	03	04	05
IRON	MG/KG	12700	26910	8810	30120	23710
POTASSIUM	MG/KG	1240	3550	1290	3750	3160
MANGANESE	MG/KG	141	309	98.0	597	459
SODIUM	MG/KG	196	342	168	407	307
ZINC	MG/KG	42.7	59.6	32.9	87.3	63.4

MCK0003110



ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes

DATE RECEIVED : 06/25/90

REPORT DATE : 07/20/90

PARAMETER	UNITS	06	07	08	09	10
IRON	MG/KG	26030	26490	25250	23260	26400
POTASSIUM	MG/KG	4730	3910	4830	2920	4980
MANGANESE	MG/KG	606	607	545	642	559
SODIUM	MG/KG	333	324	367	381	396
ZINC	MG/KG	121	70.6	71.9	74.7	78.1

MCK0003111



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes

DATE RECEIVED : 06/25/90

REPORT DATE : 07/20/90

PARAMETER	UNITS	11	12	13
IRON	MG/KG	23920	26430	9140
POTASSIUM	MG/KG	4460	4320	1490
MANGANESE	MG/KG	209	521	102
SODIUM	MG/KG	328	424	178
ZINC	MG/KG	69.2	78.1	32.2

MCK0003112



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes

ATI I.D. : 006400

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
IRON	MG/KG	00640001	12700	12600	1	**	**	**
IRON	MG/KG	00640013	9140	8760	4	**	**	**
POTASSIUM	MG/KG	00640001	1240	1260	2	1520	248	109
POTASSIUM	MG/KG	00640013	1490	1360	9	1630	250	82
MANGANESE	MG/KG	00640001	141	141	0	263	99.2	123
MANGANESE	MG/KG	00640013	102	114	11	197	99.8	89
SODIUM	MG/KG	00640001	196	217	10	838	590	107
SODIUM	MG/KG	00640013	178	168	6	802	594	106
ZINC	MG/KG	00640001	42.7	43.6	2	79.5	49.6	73
ZINC	MG/KG	00640013	32.2	31.6	2	89.6	49.9	116

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable

MCK0003113



ATI I.D. : 00640001

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/19/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 06/30/90
CLIENT I.D.	: MK-SB-02-20.5-21	DATE ANALYZED	: 07/08/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003114



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00640002

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-SB-02-41-41.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/19/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003115



ATI I.D. : 00640003

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-SB-12-20-20.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/20/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003116



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00640004

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-SB-12-30.5-31
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/20/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003117



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00640005

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-SB-12-41-41.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/20/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003118



ATI I.D. : 00640006

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-SB-15-26-26.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/21/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003119



ATI I.D. : 00640007

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-SB-15-41-41.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/21/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003120



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00640008

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-SB-14-26-26.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/21/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003121



ATI I.D. : 00640009

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-SB-14-41-41.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/21/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003122



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00640010

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-SB-11-26-26.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003123



ATI I.D. : 00640011

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-SB-11-41-41.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL
DIETHYLENE GLYCOL
PROPYLENE GLYCOL
HEXYLENE GLYCOL

<2.0
<2.0
<2.0
<2.0

MCK0003124



ATI I.D. : 00640012

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-SB-10-30.5-31
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003125



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00640013

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-SB-10-46-46.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003126



ATI I.D. : 00640014

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/20/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 06/30/90
CLIENT I.D.	: MK-SB-13-25.5-26	DATE ANALYZED	: 07/08/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003127



ATI I.D. : 00640015

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : MK-SB-13-41-41.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/20/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL
DIETHYLENE GLYCOL
PROPYLENE GLYCOL
HEXYLENE GLYCOL

<2.0
<2.0
<2.0
<2.0

MCK0003128



REAGENT BLANK

LIST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
DATE EXTRACTED : 07/06/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003129



REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
DATE EXTRACTED : 07/06/90
DATE ANALYZED : 07/08/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003130



QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 07/06/90
DATE ANALYZED : 07/08/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SAMPLE SPIKED, SPIKED % SAMPLE REC., DUP. SPIKED %, DUP. SPIKED %, RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003131



ATI I.D. : 006400

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
REF I.D. : 00640003

DATE EXTRACTED : 07/06/90
DATE ANALYZED : 07/08/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003132

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 006400

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 REF I.D. : 00646602

 DATE EXTRACTED : 07/06/90
 DATE ANALYZED : 07/08/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	DUP.		RPD
				% REC.	% REC.	
ETHYLENE GLYCOL	<2.0	40.0	15	38	13	14
DIETHYLENE GLYCOL	<2.0	20.0	2.6	13	2.5	0
PROPYLENE GLYCOL	<2.0	20.0	13	65	13	0
HEXYLENE GLYCOL	<2.0	40.0	15	38	13	14

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003133



ATI I.D. : 006400

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
REF I.D. : 00652405

DATE EXTRACTED : 07/06/90
DATE ANALYZED : 07/08/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SAMPLE SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration x 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample x 100

GCMS - RESULTS

ATI I.D. : 00640001

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-02-20.5-21
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/19/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/01/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	101
B (%)	104
LUENE-D8 (%)	106

MCK0003135



Analytical **Technologies**, INC. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003136

ATI I.D. : 00640002

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
CLIENT I.D. : MK-SB-02-41-41.5
SAMPLE MATRIX : SOIL
DATE SAMPLED : 06/19/90
DATE RECEIVED : 06/25/90
DATE EXTRACTED : 06/28/90
DATE ANALYZED : 07/01/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	0.1
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.1
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.08
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	86
3 (%)	95
TOLUENE-D8 (%)	98

MCK0003137



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003138

ATI I.D. : 00640003

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-12-20-20.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/20/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/04/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	108
3 (%)	107
TOLUENE-D8 (%)	101

MCK0003139



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640003

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003140

ATI I.D. : 00640004

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-12-30.5-31
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/20/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/04/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	105
B (%)	95
TOLUENE-D8 (%)	89

MCK0003141



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640004

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003142

ATI I.D. : 00640005

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : MK-SB-12-41-41.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/20/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/04/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1 2-DICHLOROETHANE-D4 (%)	96
3 (%)	97
TOLUENE-D8 (%)	94

MCK0003143



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640005

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003144



ATI I.D. : 00640006

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : MK-SB-15-26-26.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/21/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/04/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	2.0
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
DEFB (%)	91
TOLUENE-D8 (%)	93

MCK0003145



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640006

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003146



ATI I.D. : 00640007

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-15-41-41.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/21/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/04/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	4.0
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	0.80
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	0.14
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.91
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	1.4
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)
 B (%)
 TOLUENE-D8 (%)

91
 91
 86

MCK0003147



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640007

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
602 ALIPHATIC HYDROCARBON	0.4
610 ALIPHATIC HYDROCARBON	0.3
635 ALIPHATIC HYDROCARBON	0.3
649 ALIPHATIC HYDROCARBON	0.3
736 ALIPHATIC HYDROCARBON	0.3

MCK0003148

ATI I.D. : 00640008

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-14-26-26.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/21/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/04/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	102
3 (%)	94
TOLUENE-D8 (%)	93

MCK0003149



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640008

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003150

ATI I.D. : 00640009

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : MK-SB-14-41-41.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/21/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/05/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	80
B (%)	89
TOLUENE-D8 (%)	90

MCK0003151



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640009

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003152



ATI I.D. : 00640010

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-11-26-26.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/06/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	TR<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%) 83
 B (%) 84
 TOLUENE-D8 (%) 89

MCK0003153

TR - Compound detected at an unquantifiable trace level



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640010

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003154



ATI I.D. : 00640011

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-11-41-41.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/06/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	81
B (%)	91
TOLUENE-D8 (%)	93

MCK0003155



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640011

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003156

ATI I.D. : 00640012

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/22/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 06/28/90
CLIENT I.D.	: MK-SB-10-30.5-31	DATE ANALYZED	: 07/06/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	0.2
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	0.3
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.3
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.7
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	90
B (%)	97
TOLUENE-D8 (%)	98

MCK0003157



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640012

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003158

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-10-46-46.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/22/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/06/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	94
B (%)	102
TOLUENE-D8 (%)	103

MCK0003159



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640013

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003160



ATI I.D. : 00640014

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-13-25.5-26
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/20/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/01/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	3.9
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%) 88
 TOLUENE-D8 (%) 101
 TOLUENE-D6 (%) 96

MCK0003161



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003162



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
 DATE EXTRACTED : 06/28/90
 DATE ANALYZED : 07/04/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
1,1-DICHLOROMETHANE	<0.05
1,1,1,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	115
BFB (%)	115
TOLUENE-D8 (%)	107

- Compound detected at an unquantifiable trace level

MCK0003163



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003164



REAGENT BLANK

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
DATE EXTRACTED : 06/27/90
DATE ANALYZED : 07/05/90
UNITS : MG/KG
DILUTION FACTOR : N/A

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, such as CHLOROMETHANE <0.50, BROMOMETHANE <0.50, etc.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Surrogate Name and Percent Recovery. Includes 1,2-DICHLOROETHANE-D4 (%), BFB (%), and TOLUENE-D6 (%).



Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003166



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : N/A

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, such as CHLOROMETHANE <0.50, METHYLENE CHLORIDE 0.6, and TOTAL XYLENES <0.05.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Compound Name and Percent Recovery. Shows values for 1,2-DICHLOROETHANE-D4 (102%), BFB (96%), and TOLUENE-D8 (100%).

MCK0003167



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003168



REAGENT BLANK

MST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
 DATE EXTRACTED : 06/30/90
 DATE ANALYZED : 07/06/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
1,1-DICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	97
BFB (%)	106
TOLUENE-D8 (%)	107

MCK0003169



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003170



QUALITY CONTROL DATA

ATI I.D. : 006400

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/02/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE REC., DUP. % SPIKED, DUP. % REC., RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003171



QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 006400

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 06/25/90
DATE ANALYZED : 07/05/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003172



ATI I.D. : 006400

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON Sfes
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/09/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SAMPLE REC., DUP. % REC., RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SW-01-62390
 SAMPLE MATRIX : WATER

 DATE SAMPLED : 06/23/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : N/A
 DATE ANALYZED : 07/07/90
 UNITS : UG/L
 DILUTION FACTOR : 5

COMPOUNDS	RESULTS
CHLOROMETHANE	<50
BROMOMETHANE	<50
VINYL CHLORIDE	<5
CHLOROETHANE	<5
METHYLENE CHLORIDE	<25
ACETONE	<100
CARBON DISULFIDE	<5
1,1-DICHLOROETHENE	<5
1,1-DICHLOROETHANE	180
1,2-DICHLOROETHENE (TOTAL)	<5
CHLOROFORM	<5
1,2-DICHLOROETHANE	<5
2-BUTANONE (MEK)	<100
1,1,1-TRICHLOROETHANE	840
CARBON TETRACHLORIDE	<5
VINYL ACETATE	<50
BROMODICHLOROMETHANE	<5
1,1,2,2-TETRACHLOROETHANE	<5
1,2-DICHLOROPROPANE	<5
CIS-1,3-DICHLOROPROPENE	<5
TRICHLOROETHENE	<5
DIBROMOCHLOROMETHANE	<5
1,1,2 TRICHLOROETHANE	<5
BENZENE	<5
TRANS-1,3-DICHLOROPROPENE	<5
BROMOFORM	<25
2-HEXANONE (MBK)	<50
4-METHYL-2-PENTANONE (MIBK)	<50
TETRACHLOROETHENE	<5
TOLUENE	<10
CHLOROBENZENE	<5
ETHYL BENZENE	<5
STYRENE	<5
TOTAL XYLENES	<5

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	94
BFB (%)	109
TOLUENE-D8 (%)	105

MCK0003174



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640016

MATRIX : WATER

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003175

ATI I.D. : 00640017

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SW-02-62390
 SAMPLE MATRIX : WATER

 DATE SAMPLED : 06/23/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : N/A
 DATE ANALYZED : 07/07/90
 UNITS : UG/L
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	34
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	61
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	103
TOLUENE-D8 (%)	104

MCK0003176



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00640017

MATRIX : WATER

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003177

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 006400
 DATE EXTRACTED : N/A
 DATE ANALYZED : 07/06/90
 UNITS : UG/L
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	95
BFB (%)	106
TOLUENE-D8 (%)	107

MCK0003178

TR - Compound detected at an unquantifiable trace level



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003179

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 006400
 DATE EXTRACTED : N/A
 DATE ANALYZED : 07/07/90
 UNITS : UG/L
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	96
BFB (%)	96
TOLUENE-D8 (%)	98

MCK0003180

TR - Compound detected at an unquantifiable trace level



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A



ATI I.D. : 006400

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON Sfes
REF I.D. : 00640017

DATE EXTRACTED : N/A
DATE ANALYZED : 07/09/90
SAMPLE MATRIX : WATER
UNITS : UG/L

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SAMPLE SPIKED, SAMPLE REC., DUP. SPIKED %, DUP. SPIKED %, RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003182



ATI I.D. : 00640001

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/19/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 07/02/90
CLIENT I.D.	: MK-SB-02-20.5-21	DATE ANALYZED	: 07/09/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS (2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS (2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS (2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003183

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	58
2-FLUOROBIPHENYL (%)	71
TERPHENYL (%)	65
PHENOL-D6 (%)	51
2-FLUOROPHENOL (%)	62
2,4,6-TRIBROMOPHENOL (%)	72

MCK0003184



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003185



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-02-41-41.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/19/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/10/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.85
2,4,5-TRICHLOROPHENOL	<0.17
2-CHLORONAPHTHALENE	<0.85
2-NITROANILINE	<0.17
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.85
3-NITROANILINE	<0.17
ACENAPHTHENE	<0.85
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.17
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003186

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ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
NZO(b) FLUORANTHENE	<0.17
NZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	69
2-FLUOROBIPHENYL (%)	71
TERPHENYL (%)	58
PHENOL-D6 (%)	42
2-FLUOROPHENOL (%)	59
2,4,6-TRIBROMOPHENOL (%)	73

MCK0003187



Analytical **Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003188

ATI I.D. : 00640003

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-12-20-20.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/20/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
TROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003189

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	73
2-FLUOROBIPHENYL (%)	69
TERPHENYL (%)	61
PHENOL-D6 (%)	58
2-FLUCROPHENOL (%)	72
2,4,6-TRIBROMOPHENOL (%)	70

MCK0003190



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640003

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003191



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 CLIENT I.D. : MK-SB-12-30.5-31
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/20/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/10/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.85
2,4,5-TRICHLOROPHENOL	<0.17
2-CHLORONAPHTHALENE	<0.85
2-NITROANILINE	<0.17
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.85
3-NITROANILINE	<0.17
ACENAPHTHENE	<0.85
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.17
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003192

(CONTINUED NEXT PAGE)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	57
2-FLUOROBIPHENYL (%)	65
TERPHENYL (%)	56
PHENOL-D6 (%)	39
2-FLUOROPHENOL (%)	47
2,4,6-TRIBROMOPHENOL (%)	61



ANALYTICAL TECHNOLOGIES, INC. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640004

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003194

ATI I.D. : 00640005

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-12-41-41.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/20/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/10/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
1,4-DICHLOROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
BENZOFURAN	<0.17
4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003195

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ATI I.D. : 00640006

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-15-26-26.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/21/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/10/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.85
2,4,5-TRICHLOROPHENOL	<0.17
2-CHLORONAPHTHALENE	<0.85
2-NITROANILINE	<0.17
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.85
3-NITROANILINE	<0.17
ACENAPHTHENE	<0.85
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.17
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003196

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ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	55
2-FLUOROBIPHENYL (%)	65
TERPHENYL (%)	52
PHENOL-D6 (%)	45
2-FLUOROPHENOL (%)	57
2,4,6-TRIBROMOPHENOL (%)	62

MCK0003197



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640006

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003198

ATI I.D. : 00640007

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-15-41-41.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/21/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/10/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
m-NITROSO-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
m-TROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
BENZOFURAN	<0.17
1,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003199

(CONTINUED NEXT PAGE)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/21/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 07/02/90
CLIENT I.D.	: MK-SB-14-26-26.5	DATE ANALYZED	: 07/10/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.85
2,4,5-TRICHLOROPHENOL	<0.17
2-CHLORONAPHTHALENE	<0.85
2-NITROANILINE	<0.17
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.85
3-NITROANILINE	<0.17
ACENAPHTHENE	<0.85
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.17
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003200

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
BENZO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	47
2-FLUOROBIPHENYL (%)	65
TERPHENYL (%)	57
PHENOL-D6 (%)	45
2-FLUOROPHENOL (%)	61
2,4,6-TRIBROMOPHENOL (%)	87

MCK0003201



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640008

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003202



ATI I.D. : 00640009

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/21/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 07/02/90
CLIENT I.D.	: MK-SB-14-41-41.5	DATE ANALYZED	: 07/10/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS (2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS (2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
XACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS (2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003203

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	57
2-FLUOROBIPHENYL (%)	67
TERPHENYL (%)	54
PHENOL-D6 (%)	46
2-FLUOROPHENOL (%)	59
2,4,6-TRIBROMOPHENOL (%)	72

MCK0003204



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKesson Sfes
 CLIENT I.D. : MK-SB-11-26-26.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/11/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
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N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.17
DIBENZO-FURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003205

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Analytical **Technologies**, INC. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640009

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003206

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUCRANTHENE	<0.17
NZO(k) FLUORANTHENE	<0.17
NZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	53
2-FLUOROBIPHENYL (%)	70
TERPHENYL (%)	69
PHENOL-D6 (%)	45
2-FLUOROPHENOL (%)	53
2,4,6-TRIBROMOPHENOL (%)	65

MCK0003207



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640010

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003208



Analytical **Technologies**, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640011

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003209



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SB-10-30.5-31
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/22/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/10/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSC-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003210

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	65
2-FLUOROBIPHENYL (%)	78
TERPHENYL (%)	65
PHENOL-D6 (%)	44
2-FLUOROPHENOL (%)	53
2,4,6-TRIBROMOPHENOL (%)	68

MCK0003211



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640012

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003212

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/22/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 07/02/90
CLIENT I.D.	: MK-SB-10-46-46.5	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
1,2,3,4-TETRAHYDROBENZOFURAN	<0.17
4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003213



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	62
2-FLUOROBIPHENYL (%)	73
TERPHENYL (%)	64
PHENOL-D6 (%)	52
2-FLUOROPHENOL (%)	61
2,4,6-TRIBROMOPHENOL (%)	74

MCK0003214



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640013

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003215

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/20/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 07/02/90
CLIENT I.D.	: MK-SB-13-25.5-26	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003216



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
N2O(k)FLUORANTHENE	<0.17
N2O(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	78
2-FLUOROBIPHENYL (%)	87
TERPHENYL (%)	72
PHENOL-D6 (%)	57
2-FLUOROPHENOL (%)	60
2,4,6-TRIBROMOPHENOL (%)	65

MCK0003217



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640014

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003218

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/20/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: MCKESSON Sfes	DATE EXTRACTED	: 07/02/90
CLIENT I.D.	: MK-SB-13-41-41.5	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
1-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
PENTACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
1BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003219



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUCRANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	68
2-FLUOROBIPHENYL (%)	78
TERPHENYL (%)	68
PHENOL-D6 (%)	52
2-FLUOROPHENOL (%)	46
2,4,6-TRIBROMOPHENOL (%)	61

MCK0003220



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640015

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

815 BUTYL CARBITOL
850 PHENOXY ETHANOL

1
0.6

MCK0003221



REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/09/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSC-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003222

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	54
2-FLUOROBIPHENYL (%)	59
TERPHENYL (%)	55
PHENOL-D6 (%)	43
2-FLUOROPHENOL (%)	55
2,4,6-TRIBROMOPHENOL (%)	56

MCK0003223



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : MG/KG

COMPOUNDS	RESULTS
447 ALIPHATIC HYDROCARBON C8	0.8
1631 ALIPHATIC HYDROCARBON C20	0.2

MCK0003224

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 006400
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/02/90
 PROJECT # : 17333,157.11 DATE ANALYZED : 07/09/90
 PROJECT NAME : McKESSON Sfes SAMPLE MATRIX : SOIL
 REF I.D. : 00640003 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<0.17	3.3	2.2	68	2.5	74	8
ACENAPHTHENE	<0.17	3.3	2.1	63	2.3	70	10
2,4-DINITROTOLUENE	<0.17	3.3	2.6	78	2.9	87	11
PYRENE	<0.17	3.3	2.7	81	2.6	78	4
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	2.0	60	2.2	68	12
1,4-DICHLOROBENCENE	<0.17	3.3	1.8	55	2.1	63	14
PENTACHLOROPHENOL	<0.85	13.2	9.0	68	10.7	81	17
PHENOL	<0.17	6.6	3.8	57	4.9	74	26
2-CHLOROPHENOL	<0.17	6.6	4.7	72	5.5	84	15
4-CHLORO-3-METHYLPHENOL	<0.17	6.6	4.4	67	5.5	84	22
4-NITROPHENOL	<0.85	13.2	12.3	93	13.0	98	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003225



ATI I.D. : 006400

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 REF I.D. : 00640309

DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/18/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<0.17	3.3	3.5	106	3.1	94	12
ACENAPHTHENE	0.38	3.3	2.2	67	2.3	70	4
2,4-DINITROTOLUENE	<0.17	3.3	2.1	64	1.6	49	27
PYRENE	<0.17	3.3	2.8	85	2.9	88	3
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	2.9	88	3.2	97	10
1,4-DICHLOROBENZENE	<0.17	3.3	2.6	79	2.8	85	7
PENTACHLOROPHENOL	<0.85	13.2	15.3	116	13.0	98	17
PHENOL	<0.17	6.6	5.2	79	6.5	98	21
2-CHLOROPHENOL	<0.17	6.6	6.9	104	4.9	74	33
4-CHLORO-3-METHYLPHENOL	<0.17	6.6	4.4	67	3.8	58	14
4-NITROPHENOL	<0.85	13.2	11.3	86	8.9	72	18

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003226

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/23/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/25/90
PROJECT NAME	: McKESSON Sfes	DATE EXTRACTED	: 06/27/90
CLIENT I.D.	: MK-SW-01-62390	DATE ANALYZED	: 07/07/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	65
ANILINE	<10
BIS (2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	TR<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS (2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	27
NITROSO-DI-N-PROPYLAMINE	<10
DICHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS (2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
1-NITROPHENOL	<50
BENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003227



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSDIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	71
2-FLUOROBIPHENYL (%)	81
TERPHENYL (%)	60
PHENOL-D6 (%)	80
2-FLUOROPHENOL (%)	76
2,4,6-TRIBROMOPHENOL (%)	108

MCK0003228



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640016

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
847 METHYLETHYLPHENOL	40
1200 ALIPHATIC HYDROCARBON C15	70
1355 BRANCHED PHENOL	70
2246 ALIPHATIC HYDROCARBON C25	70
1258 TETRAMETHYLBUTYL PHENOL	70
500-2500 TOTAL EXTRACTABLE HYDROCARBONS C8-C28+	3000

MCK0003229



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : MK-SW-02-62390
 SAMPLE MATRIX : WATER

DATE SAMPLED : 06/23/90
 DATE RECEIVED : 06/25/90
 DATE EXTRACTED : 06/27/90
 DATE ANALYZED : 07/07/90
 UNITS : UG/L
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<50
2,4,5-TRICHLOROPHENOL	<10
2-CHLORONAPHTHALENE	<50
2-NITROANILINE	<10
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<50
3-NITROANILINE	<10
ACENAPHTHENE	<50
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<10
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003230

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ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHthalate	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	81
2-FLUOROBIPHENYL (%)	93
TERPHENYL (%)	46
PHENOL-D6 (%)	63
2-FLUOROPHENOL (%)	68
2,4,6-TRIBROMOPHENOL (%)	113

MCK0003231



Additional Compounds (Semi-Quantitated)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00640017

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
1000-2500 TOTAL EXTRACTABLE HYDROCARBONS C13-C28	2000

MCK0003232



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006400

UNITS : UG/L

COMPOUNDS	RESULTS
793 ALIPHATIC HYDROCARBON C11	80
865 ALIPHATIC HYDROCARBON C12	50
884 ALIPHATIC HYDROCARBON C12	70
942 ALIPHATIC HYDROCARBON C13	200
1210 ALIPHATIC HYDROCARBON C15	40

MCK0003233



ATI I.D. : 006400

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : MCKESSON Sfes
 REF I.D. : REAGENT WATER

DATE EXTRACTED : 06/27/90
 DATE ANALYZED : 07/05/90
 SAMPLE MATRIX : SOIL
 UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					% SPIKED	% REC.	
1,2,4-TRICHLOROBENZENE	<10	100	59	59	57	57	3
ACENAPHTHENE	<10	100	58	58	61	61	5
2,4-DINITROTOLUENE	<10	100	54	54	56	56	4
PYRENE	<10	100	71	71	69	69	3
N-NITROSO-DI-N-PROPYLAMINE	<10	100	38	38	39	39	3
1,4-DICHLOROBENZENE	<10	100	47	47	46	46	2
PENTACHLOROPHENOL	<50	400	214	54	210	52	4
PHENOL	<10	200	91	46	63	32	34
2-CHLOROPHENOL	<10	200	109	55	76	38	37
4-CHLORO-3-METHYLPHENOL	<10	200	121	61	92	46	28
4-NITROPHENOL	<50	400	245	61	271	68	11

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003234



REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : McKESSON Sfes
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 006400
 DATE EXTRACTED : 06/27/90
 DATE ANALYZED : 07/04/90
 UNITS : UG/L
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSDIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
OPHORONE	<10
1-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
6-DINITROTOLUENE	<10
1-METHYL PHTHALATE	<10
4-CHLOROPHENYL PHENYL ETHER	<10

MCK0003235

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	73
2-FLUOROBIPHENYL (%)	70
TRIPHENYL (%)	55
PHENOL-D6 (%)	5*
2-FLUOROPHENOL (%)	49
2,4,6-TRIBROMOPHENOL (%)	86

* Result out of limits due to sample matrix interference

CHAIN OF CUSTODY FORM

1 of 3

Lab: **SATI**

Job Number: **17333157.11**

Name/Location: **Markesson Sfes**

Project Manager: **B. Chadwick**

Samplers: **D. Johnson**

Recorder: *[Signature]*
 (Signature Required)

SOURCE CODE	MATRIX			# CONTAINERS & PRESERV.		SAMPLE NUMBER OR LAB NUMBER			DATE			STATION DESCRIPTION/NOTES		
	Water	Sediment	Soil	Oil	Unpres.	FNO ₃	Yr	Wk	Seq	Yr	Mo		DY	Time
01	X				X		90	06	19				PM	MK-SB-02-205-21
02	X				X		90	06	19				PM	MK-SB-02-411-413
03	X				X		90	06	20				AM	MK-SB-12-20-203
04	X				X		90	06	20				AM	MK-SB-12-30531
05	X				X		90	06	20				AM	MK-SB-12-41-415
06	X				X		90	06	20				PM	MK-SB-13-255-26
07	X				X		90	06	20				PM	MK-SB-13-41-415
08	X				X		90	06	21				AM	MK-SB-15-26-26.5
09	X				X		90	06	21				AM	MK-SB-15-41-41.5
10	X				X		90	06	21				PM	MK-SB-14-26-26.5

PARAMETERS REQUESTED:

EPA 601/8010	X
EPA 602/8020	X
EPA 624/8240	X
EPA 625/8270	X
ICP METALS	X
EPA 8015/MPH	X
Hydrocarbons	X
PH-9045 Method	X
ION (Cl, SO4, F, NO3, N)	X

LAB NUMBER	DEPTH IN FEET		COL MTD CD	OA CODE	MISCELLANEOUS
	Yr	Seq			
MCK0003237					NOTE: MK-SB-02 MK-SB-12 MK-SB-13 = RUSH TO MEET HOLDING TIME MK-SB-15 MK-SB-14 Rush if necessary to meet holding time

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) <i>[Signature]</i>	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE/TIME 6/20/05
RELINQUISHED BY: (Signature) <i>[Signature]</i>	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE/TIME 6/20/05
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: <i>[Signature]</i> DATE/TIME 6/21/05

CHAIN OF CUSTODY FORM

Lab: **ATI** 7-1-81

Job Number: **17333, 157.11**
Name/Location: **Mckesson Siles**
Project Manager: **B. Chedwick**

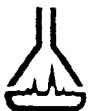
Samplers: **D. Johnson**
Recorder: **B. Chedwick**
(Signature Required)

SOURCE	MATRIX		# CONTAINERS & PRESERV.		SAMPLE NUMBER OR LAB NUMBER			DATE			STATION DESCRIPTION/NOTES	
	Water	Sediment	Oil	Unpres. F.H.O.	Yr	Wk	Seq	Yr	Mo	Dy		Time
17	X			X	90	06	23	90	06	23	AM	MX-SW-01-62390
17	X			X	90	06	23	90	06	23	AM	MX-SW-02-62390

ANALYSIS REQUESTED	
EPA 601/8010	
EPA 602/8020	XX
EPA 624/8240	XX
EPA 632/8270	XX
ICP METALS	
EPA 8015M/TPH	

*(290 mg/l Vols)
(2.1 mg/l as jar
per sample)*

LAB NUMBER	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD			
					RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)
					<i>Dustin Chedwick</i>	<i>Bob Doby</i>	<i>6/23/90</i>	<i>WPS</i>
					<i>B. Chedwick</i>			
MCK0003239								
METHOD OF SHIPMENT: Case rec								



ATI I.D. 007029

July 27, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick

On July 3, 1990, Analytical Technologies, Inc. received two soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nm



Richard M. Amano
Laboratory Manager

MCK0003240



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
pH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010

MCK0003241



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 007029

DATE RECEIVED : 07/03/90

REPORT DATE : 07/27/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-16-6'	SOIL	07/02/90
02	MK-SB-16-21'	SOIL	07/02/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	2

MCK0003242

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007029

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/03/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	01	02
CHLORIDE	MG/KG	<5	<5
FLUORIDE	MG/KG	<5	<5
NITRATE AS NITROGEN	MG/KG	3.0	0.6
PH	UNITS	4.2	6.3
SULFATE	MG/KG	5620	239

MCK0003243



GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007029

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE, SPIKE CONC, % REC. Rows include Chloride, Fluoride, Nitrate as Nitrogen, PH, and Sulfate.

MCK0003244

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100

METALS RESULTS

ATI I.D. : 007029

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/03/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	01	02
IRON	MG/KG	10360	24620
POTASSIUM	MG/KG	999	3060
MANGANESE	MG/KG	622	233
SODIUM	MG/KG	154	268
ZINC	MG/KG	36.9	87.8

MCK0003245



Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive, San Diego, CA 92121 (619) 458-9141

3.4.1

000277

ATI I.D. 006466

July 27, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333-157.11

Attention: Burton Chadwick

On June 27, 1990, Analytical Technologies, Inc. received six soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.



Timothy A. Fitzpatrick
Inorganics Supervisor

TJF:bc



Richard M. Amano
Laboratory Manager

MCK0003246



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
pH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003247



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 0000157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 006466

DATE RECEIVED : 06/27/90
REPORT DATE : 07/27/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	00-EE-12-05'	SOIL	06/26/90
02	00-EE-12-01'	SOIL	06/26/90
03	00-EE-04-12'	SOIL	06/26/90
04	00-EE-01-05'	SOIL	06/26/90
05	00-EE-05-00.5'	SOIL	06/27/90
06	00-EE-05-40.5'	SOIL	06/27/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	6

MCK0003248

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



GENERAL CHEMISTRY RESULTS

ATI I.D. : 006466

CLIENT : HARDING LAWSON ASSOC. - TUSTIN
PROJECT # : 17003-157.11
PROJECT NAME : MCKEESSON SANTA FE SPRINGS

DATE RECEIVED : 06/27/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/KG	51.0	<5	73.9	52.2	64.9
FLUORIDE	MG/KG	<5	9	<5	<5	<5
NITRATE AS NITROGEN	MG/KG	0.7	0.3	0.8	0.5	0.7
PETROLEUM HYDROCARBONS, IR	MG/KG	<1	<1	<1	<1	2
PH	UNITS	8.2	8.2	7.7	7.9	8.0
SULFATE	MG/KG	<100	<100	<100	<100	<100

MCK0003249

GENERAL CHEMISTRY RESULTS

ATI I.D. : 006465

CLIENT : WARDING LAWSON ASSOC. - TUSTIN
PROJECT # : 000015711
PROJECT NAME : MCKESBON SANTA FE SPRINGS

DATE RECEIVED : 06/27/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	05
CHLORIDE	MG/KG	84.8
FLUORIDE	MG/KG	<6
NITRATE AS NITROGEN	MG/KG	0.8
PETROLEUM HYDROCARBONS, 18	MG/KG	<1
PH	UNITS	7.6
SULFATE	MG/KG	<100

MCK0003250



GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC. - TUSTIN
PROJECT # : 17000-187-11
PROJECT NAME : COXESSON SANTA FE SPRINGS

ATI I.D. : 006466

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/KG	00650701	1390	1250	3	**	**	**
FLUORIDE	MG/KG	00646626	<5	<5	0	37	48	77
NITRATE AS NITROGEN	MG/KG	00646626	0.7	0.6	15	7.7	6.0	118
NITRATE AS NITROGEN	MG/KG	00652402	0.5	0.6	18	6.5	6.0	99
PETROLEUM HYDROCARBONS	MG/KG	00646626	<1	<1	0	12	10	120
PH	UNITS	00646606	7.5	7.7	1	N/A	N/A	N/A
SULFATE	MG/KG	00640009	<100	<100	0	239	200	120
SULFATE	MG/KG	00646626	<100	<100	0	275	200	137

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable

MCK0003251



METALS RESULTS

ATI I.D. : 006466

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17000.157.11
PROJECT NAME : MCKEEBON SANTA FE SPRINGS

DATE RECEIVED : 06/27/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	01	02	03	04	05
IRON	MG/KG	24220	22500	24740	32070	33240
POTASSIUM	MG/KG	4090	4180	4780	2190	4450
MANGANESE	MG/KG	506	312	482	551	457
SODIUM	MG/KG	350	278	374	329	408
ZINC	MG/KG	52.4	50.0	62.1	61.2	61.2

MCK0003252



METALS RESULTS

ATI I.D. : 006466

CLIENT : HARDING LAWSON ASSOC. - TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 06/27/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	06
IRON	MG/KG	18200
POTASSIUM	MG/KG	2750
MANGANESE	MG/KG	350
SODIUM	MG/KG	260
ZINC	MG/KG	40.4

MCK0003253

METALS - QUALITY CONTROL

CLIENT : HARRISON LAWSON ASSOC. - TUSTIN

PROJECT # : 17002.137.11

PROJECT NAME : HARRISON SANTA FE SPRINGS

ATI I.D. : 006466

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
IRON	MG/KG	00646606	18000	18000	4	**	**	**
POTASSIUM	MG/KG	00646606	2750	2810	2	**	**	**
MANGANESE	MG/KG	00646606	383	349	4	463	99.8	100
SODIUM	MG/KG	00646606	260	259	0	851	624	95
ZINC	MG/KG	00646606	10.4	41.4	2	28.0	49.9	95

MCK0003254

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable



GAE CHROMATOGRAPHY - RESULTS

ATI I.D. : 00646601

TEST : GUMMOL

CLIENT : HARDING LAWSON ASSOC. -TUSTIN
PROJECT # : 17000.157.11
PROJECT NAME : MCKEEBON SANTA FE SPRINGS
CLIENT I.D. : MCH-SP-18-05'
SAMPLE MATERIAL : SOIL

DATE SAMPLED : 06/26/90
DATE RECEIVED : 06/27/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL <2.0
DIETHYLENE GLYCOL <2.0
PROPYLENE GLYCOL <2.0
HEXYLENE GLYCOL <2.0

MCK0003255



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00546502

TEST : 0100017

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17000-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-88-19-41
SAMPLE MATRIX : FOIL
DATE SAMPLED : 06/26/90
DATE RECEIVED : 06/27/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDE	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003256

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00646503

TEST : BLANK

CLIENT : HARDING LAWSON ASSOC. - TUSTIN
PROJECT # : 17100-157.11
PROJECT NAME : MCKEEBON SANTA FE SPRINGS
CLIENT I.D. : MX-88-04-161
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/26/90
DATE RECEIVED : 06/27/90
DATE EXTRACTED : 06/30/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

GCMS - RESULTS

ATI I.D. : 00646601

TEST : EPA 8160-GC MS FOR VOLATILE ORGANICS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/26/90
PROJECT #	: 11000-157.11	DATE RECEIVED	: 06/27/90
PROJECT NAME	: HANNESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/02/90
CLIENT I.D.	: MCK-88-19-DB	DATE ANALYZED	: 07/07/90
SAMPLE NAME	: 11000-157.11	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.25
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEX)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEX)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

MCK0003258

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-DA (%)	88
BFB (%)	99
TOLUENE-DB (%)	101



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8210 TO ME FOR VOLATILE ORGANICS)

AT# I.D. : 00646601

MATRIX : EDIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003259



GCMS - RESULTS

ATI I.D. : 00646602

TEST : EPA 8160 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARRING LAWSON ASSOC.-TUSTIN
PROJECT # : 17000-157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : NK-88-12-41
SAMPLE MATRIX : SOIL
DATE SAMPLED : 06/26/90
DATE RECEIVED : 06/27/90
DATE EXTRACTED : 07/02/90
DATE ANALYZED : 07/07/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DIBROMIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,2-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

MCK0003260

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%) 84
BFB (%) 91
TOLUENE-D8 (%) 96



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

EST : EPA 821-1-101MS FOR VOLATILE ORGANICS)

AT: I.D. : 00546602

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003261

GCMS - RESULTS

ATI I.D. : 00646602

TEST : EPA 8161 (GCMS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC. - TUSTIN
 PROJECT # : 17000-187.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT ID : MK-88-04-281
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/26/90
 DATE RECEIVED : 06/27/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/07/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLORINETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,2-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-DA (%)	85
BFB (%)	92
TOLUENE-DB (%)	97

MCK0003262

GCMS - RESULTS

ATI I.D. : 00646605

TEST # 10000000000000000000 GCMS FOR VOLATILE ORGANICS

CLIENT	HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 05/27/90
PROJECT #	10000000000000000000	DATE RECEIVED	: 05/27/90
PROJECT NAME	MISSION SANTA FE SPRINGS	DATE EXTRACTED	: 07/02/90
CLIENT ADDR	10000000000000000000	DATE ANALYZED	: 07/07/90
SAMPLE NAME	10000000000000000000	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPONENT	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLORoETHANE	<0.05
METHYLENE CHLORIDE	D.D
ACETONE	<1.0
CARBON DIOXIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,1-DICHLOROETHENE TOTAL	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,2-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,2-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MIBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	0.1
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	85
TOLUENE-D7 (%)	92

MCK0003264



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

METHOD : EPA 8210-G (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00646603

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003263

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GG/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00646605

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003265

GCMS - RESULTS

AT! I.D. : 00646606

TEST : EPA 81-0 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17032.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-82-05-43.5'
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/27/90
 DATE RECEIVED : 06/27/90
 DATE EXTRACTED : 07/02/90
 DATE ANALYZED : 07/07/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

MCK0003266

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	92
TOLUENE-D8 (%)	97

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 816-D (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00646606

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

IT

GD

MCK0003267

GCMS - RESULTS

ATI I.D. : 00646601

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-1-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	58
2-FLUOROBIPHENYL (%)	75
TERPHENYL (%)	50
PHENOL-D5 (%)	60
2-FLUOROPHENOL (%)	63
2,4,6-TRISOPROPHENOL (%)	55

MCK0003268

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

METHOD : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00646601

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

2013 ALIPHATIC HYDROCARBON C23
2074 ALIPHATIC HYDROCARBON C24
2161 ALIPHATIC HYDROCARBON C25

0.2
0.2
0.2

MCK0003269

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00646602

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

2129 ALIPHATIC HYDROCARBON

0.2

MCK0003270

GCMS - RESULTS

ATI I.D. : 00646603

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/26/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/27/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 06/29/90
CLIENT I.D.	: MK-SB-04-26'	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
F (2-CHLOROISOPROPYL)ETHER	<0.17
ETHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
-DINITROPHENOL	<0.85
ITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003271



GCMS - RESULTS

AT! I.D. : 00646603

TEST : EPA 8170 (100/ML FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSDIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENYL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLBKYL PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENY(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-DB (%)	47
2-FLUORODIPHENYL (%)	59
TERPHENYL (%)	42
PHENOL-DB (%)	43
2-FLUOROPHENYL (%)	56
2,4,6-TRIBROMOPHENOL (%)	57

MCK0003272

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8070 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00646603

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
589 DIPROPYLENE GLYCOL-METHYL ETHER	0.3
816 CYCLIC HYDROCARBON C11	2
905 ALIPHATIC HYDROCARBON C12	0.2
941 CYCLIC HYDROCARBON	0.7
1102 ALIPHATIC HYDROCARBON	0.2

MCK0003273

GCMS - RESULTS

ATI I.D. : 00646604

TEST : EPA 8170 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/26/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 06/27/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 06/29/90
CLIENT I.D.	: MK-SB-04-46'	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROMETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITroso-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003274

GCMS - RESULTS

ATI I.D. : 00646604

TEST : EPA 8170 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-1-METHYLPHENOL	<0.85
N-NITROSCIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHLOROPHTHALATE	<0.17
DIN-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SUBSTRATE PERCENT RECOVERIES

NITROBENZENE-DE (4%)	48
2-FLUOROBIPHENYL (4%)	59
TERPHENYL (4%)	46
PHENOL-DE (4%)	45
2-FLUOROPHENOL (4%)	49
2,4,6-TRIFLUOROPHENOL (4%)	55

MCK0003275



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8170 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00646604

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003276

GCMS - RESULTS

ATI I.D. : 00646605

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/27/90
PROJECT #	: 17233.157.11	DATE RECEIVED	: 06/27/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 06/29/90
CLIENT I.C.	: MK-SB-05-33.5'	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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N-NITROSDIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
1-NAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003277

GCMS - RESULTS

ATI I.D. : 00646605

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUCRANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUCRANTHENE	<0.17
BENZO(k)FLUCRANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-DE (%)	53
2-FLUOROBIPHENYL (%)	70
TERPHENYL (%)	49
PHENOL-DE (%)	46
2-FLUOROPHENOL (%)	65
2,4,6-TRIBROMOPHENOL (%)	65

MCK0003278



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

AT : EPA 8170 GC/MS FOR SEMI-VOLATILE ORGANICS)

ATI I.D. : 00646605

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003279

GCMS - RESULTS

ATI I.D. : 00646606

TEST : EPA 8170 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/27/90
PROJECT #	: 17000.157.11	DATE RECEIVED	: 06/27/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 06/29/90
CLIENT I.D.	: MK-88-05-43.5'	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003280



Analytical **Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00652404

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

366 FREON 113

10

MCK0003281

GCMS - RESULTS
ATI I.D. : 00652405
TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-08-26
SAMPLE MATRIX : SOIL
DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/12/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES
MCK0003282

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	102
TOLUENE-D8 (%)	98

GCMS - RESULTS

ATI I.D. : 00646606

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSO-N-PHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLPHENYL) PHTHALATE	<0.17
CISENE	<0.17
L-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-DE (X)	50
2-FLUOROBIPHENYL (X)	63
TERPHENYL (X)	47
PHENOL-DE (X)	47
2-FLUOROPHENOL (X)	64
2,4,6-TRIBROMOPHENOL (X)	48

MCK0003283



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8170 GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00646606

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003284

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8130 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 006466
PROJECT #	: 17032-157.11	DATE EXTRACTED	: 06/29/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/11/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
1-TOLUENE	<0.17
1,1-DIPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
1,2-DINITROTOLUENE	<0.17
2,4-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003285

GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 006466

TEST : EPA 8170 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDE	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSCARBENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<2.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZOYL PHTHALATE	<0.17
3,3-DICHLOROBENZOIC ACID	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SUBSTRATE PERCENT RECOVERIES

NITROBENZENE-DE (4)	55
2-FLUOROBIPHENYL (4)	74
TERPHENYL (4)	64
PHENOL-DE (4)	53
2-FLUOROPHENOL (4)	72
2,4,6-TRIBROMOPHENOL (4)	76

MCK0003286

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8160 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARBINE LAWSON ASSOC.-TUSTIN

ATI I.D. : 006466

UNITS : MG/KG

COMPOUNDE	RESULTS
434 ALIPHATIC HYDROCARBON C7	0.8
1613 ALIPHATIC HYDROCARBON C12	0.5
1636 CARBONIC ACID	0.2

MCK0003287

QUALITY CONTROL DATA

TEST : EPA 8170 (30. MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 006466

CLIENT : HARDING LAWSON ASSOC. - TUSTIN DATE EXTRACTED : 06/29/90

PROJECT # : UNDED. 157.11 DATE ANALYZED : 07/11/90

PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL

REF I.D. : 00646605 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<0.17	3.3	2.2	66	1.6	48	31*
ACENAPHTHENE	<0.17	3.3	2.1	64	1.9	58	10
2,4-DINITROFLUORENE	<0.17	3.3	2.3	70	2.3	70	0
PYRENE	<0.17	3.3	2.5	76	2.7	82	8
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	1.9	58	1.8	55	5
1,4-DICHLOROBENZENE	<0.17	3.3	1.9	58	1.5	45	25
PENTACHLOROPHENOL	<0.65	13.2	7.9	60	8.0	61	2
PHENOL	<0.17	6.6	3.5	53	3.1	47	12
2-CHLOROPHENOL	<0.17	6.6	4.2	64	3.3	50	25
4-CHLORO-DI-NETHYLPHENOL	<0.17	6.6	4.2	65	3.3	50	26
4-NITROPHENOL	<0.65	13.2	9.6	73	9.8	74	1

$$\% \text{ Recovery} = \frac{(\text{Spiked Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result not available due to sample matrix interference



Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

000073

ATI I.D. 006524

July 27, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

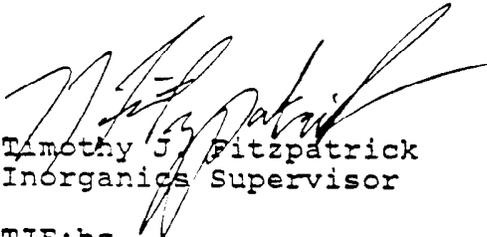
Project Name: McKesson Santa Fe Springs

Project No.: 17333-157.11

Attention: Burton Chadwick

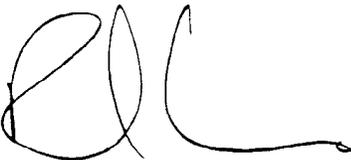
On June 29, 1990, Analytical Technologies, Inc. received eight soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.



Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:bc



Richard M. Amano
Laboratory Manager

MCK0003290

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
pH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
FUEL HYDROCARBONS	GC/FID	EPA 8015 (MODIFIED)/ CDOHS METHOD
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003291

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 ATI I.D. : 006524

DATE RECEIVED : 06/29/90
 REPORT DATE : 07/27/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MX-SB-06-26	SOIL	06/29/90
02	MX-SB-06-46	SOIL	06/29/90
03	MX-SB-07-26	SOIL	06/29/90
04	MX-SB-07-46	SOIL	06/29/90
05	MX-SB-08-26	SOIL	06/29/90
06	MX-SB-08-42.5	SOIL	06/29/90
07	MX-SB-09-21	SOIL	06/29/90
08	MX-SB-09-41	SOIL	06/29/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	8

 ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 006524

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17232.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS

DATE RECEIVED : 06/28/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/KG	<5	<5	<5	395	<5
FLUORIDE	MG/KG	<5	<5	<5	<5	<5
NITRATE AS NITROGEN	MG/KG	0.8	0.5	0.8	0.5	1.0
PETROLEUM HYDROCARBONS, IR	MG/KG	3	2	9	3	2
PH	UNITS	7.4	8.0	7.4	7.4	7.5
SULFATE	MG/KG	<100	<100	<100	<100	<100

MCK0003293



GENERAL CHEMISTRY RESULTS

ATI I.D. : 006524

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 06/29/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	06	07	08
CHLORIDE	MG/KG	<5	<5	<5
FLUORIDE	MG/KG	6	<5	<5
NITRATE AS NITROGEN	MG/KG	0.8	2.0	1.0
PETROLEUM HYDROCARBONS, IR	MG/KG	2	<1	1
PH	UNITS	7.7	7.6	7.5
SULFATE	MG/KG	<100	<100	<100

MCK0003294



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652401

TEST : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-05-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<5.0
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	-

MCK0003295

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652402

TEST : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333-157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-S2-06-46
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS	<5.0
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	-

MCK0003296



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652403

TEST : MOD EPA 8015-CDCHS (FUEL HYDROCARBONS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-07-25
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS <5.0
HYDROCARBON RANGE -
HYDROCARBONS QUANTITATED USING -

MCK0003297



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652404

TEST : MCD EPA 8015-CDOHS (FUEL HYDROCARBONS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17033.157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-46
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS <5.0
HYDROCARBON RANGE -
HYDROCARBONS QUANTITATED USING -

MCK0003298

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652405

TEST : MCD EPA 8015-CDCHS (FUEL HYDROCARBONS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17332.157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/03/90
CLIENT I.D.	: MK-SB-08-26	DATE ANALYZED	: 07/06/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<5.0
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	-

MCK0003299

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652406

TEST : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17033,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-08-42.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDSRESULTS

FUEL HYDROCARBONS <5.0
HYDROCARBON RANGE -
HYDROCARBONE QUANTITATED USING -

MCK0003300

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652407

TEST : MOD EPA 8015-COHS (FUEL HYDROCARBONS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/03/90
CLIENT I.D.	: MK-SB-09-21	DATE ANALYZED	: 07/06/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<5.0
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	-

MCK0003301



GAS CHROMATOGRAPHY - RESULTS

AT1 I.D. : 00552408

TEST : MOD EPA 8215-CDOHS (FUEL HYDROCARBONS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-09-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/06/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS <5.0
HYDROCARBON RANGE -
HYDROCARBONS QUANTITATED USING -

MCK0003302

QUALITY CONTROL DATA

TEST : MOD EPA 9015-CDOHS (FUEL HYDROCARBONS)	ATI I.D. : 006524
CLIENT : HARDING LAWSON ASSOC.-TUSTIN	DATE EXTRACTED : 07/03/90
PROJECT # : 17003.157.11	DATE ANALYZED : 07/06/90
PROJECT NAME : McKESSON SANTA FE SPRINGS	SAMPLE MATRIX : SOIL
REF I.D. : 00702601	UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.	SAMPLE	SPIKED	% SPIKED	DUP. %	DUP. %	RPD
	RESULT	SPKED	SAMPLE	REC.	SAMPLE	REC.	
FUEL HYDROCARBONS	550	500	830	54*	1100	108	28*

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to sample matrix interference

MCK0003303

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652401

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-06-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDSRESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003304

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652402

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/03/90
CLIENT I.D.	: MK-SB-06-46	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003305



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652403

TEST : GLYCOLE

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17323.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-07-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003306

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652404

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/03/90
CLIENT I.D.	: MK-SB-07-46	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003307

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652405

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-08-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003308



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652406

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/03/90
CLIENT I.D.	: MK-SB-08-42.5	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003309

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00652407

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/03/90
CLIENT I.D.	: MK-SB-09-21	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003310



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00552408

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-09-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003311



GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 005524
PROJECT #	: 17333.157.11	DATE EXTRACTED	: 07/06/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/08/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003312



QUALITY CONTROL DATA

TEST : GLYCOL

ATI I.D. : 006524

CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/06/90
 PROJECT # : 17303.157.11 DATE ANALYZED : 07/08/90
 PROJECT NAME : McKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : REAGENT SOIL UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	SAMPLE CONCENTRATION SPIKED	SPIKED SAMPLE	% SPIKED REC.	DUP. SPIKED SAMPLE REC.	DUP. % SPIKED REC.	RPD
ETHYLENE GLYCOL	<2.0	40.0	41	103	N/A	N/A	N/A
DIETHYLENE GLYCOL	<2.0	20.0	22	110	N/A	N/A	N/A
PROPYLENE GLYCOL	<2.0	20.0	21	105	N/A	N/A	N/A
HEXYLENE GLYCOL	<2.0	40.0	41	103	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003313

QUALITY CONTROL DATA

TEST : GLYCOLS ATI I.D. : 006524
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/06/90
 PROJECT # : 17333.157.11 DATE ANALYZED : 07/08/90
 PROJECT NAME : McKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : 00652405 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	DUP. SPIKED %		RPD
	RESULT	SPIKED		REC.	REC.	
ETHYLENE GLYCOL	<2.0	40.0	20	50	20	0
DIETHYLENE GLYCOL	<2.0	20.0	4.0	20	3.7	5
PROPYLENE GLYCOL	<2.0	20.0	17	85	16	5
HEXYLENE GLYCOL	<2.0	40.0	20	50	20	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003314

GCMS - RESULTS

ATI I.D. : 00652401

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-06-26
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/29/90
 DATE RECEIVED : 06/29/90
 DATE EXTRACTED : 07/03/90
 DATE ANALYZED : 07/12/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

 1,2-DICHLOROETHANE-D4 (%)
 BFB (%)
 TOLUENE-D8 (%)

 91
 102
 96

MCK0003315



Analytical **Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00652401

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003316



GCMS - RESULTS

ATI I.D. : 00652402

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-06-46
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
 DATE RECEIVED : 06/29/90
 DATE EXTRACTED : 07/03/90
 DATE ANALYZED : 07/12/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	0.2
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	0.9
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.07
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.5
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	74
BFB (%)	95
TOLUENE-D8 (%)	90

MCK0003317

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

BT : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00652402

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A



GCMS - RESULTS

ATI I.D. : 00652403

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-07-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/12/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, such as CHLOROMETHANE <0.50, BENZENE <0.05, and TOLUENE <0.10.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Compound Name and Percent Recovery. Shows recoveries for 1,2-DICHLOROETHANE-D4 (75%), BFB (89%), and TOLUENE-D8 (89%).

MCK0003319



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00652403

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003320

GCMS - RESULTS

ATI I.D. : 00652404

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-07-46
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/29/90
 DATE RECEIVED : 06/29/90
 DATE EXTRACTED : 07/03/90
 DATE ANALYZED : 07/12/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	78
BFB (%)	101
TOLUENE-D8 (%)	98

MCK0003321

GCMS - RESULTS

ATI I.D. : 00652406

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-08-42.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/29/90
 DATE RECEIVED : 06/29/90
 DATE EXTRACTED : 07/03/90
 DATE ANALYZED : 07/13/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.08
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

 2-DICHLOROETHANE-D4 (%)
 BFB (%)
 TOLUENE-D8 (%)

 91
 92
 90

MCK0003322



Analytical **Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00552405

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003323



GCMS - RESULTS

ATI I.D. : 00652407

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-09-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 06/29/90
DATE RECEIVED : 06/29/90
DATE EXTRACTED : 07/03/90
DATE ANALYZED : 07/13/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.50 or 0.05.

SUPROGATE PERCENT RECOVERIES

Table with 2 columns: Compound name and Percent Recovery. Lists 1,2-DICHLOROETHANE-D4, BFB, and TOLUENE-D8 with their respective recovery percentages.

MCK0003324



Analytical**Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00652406

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003325

GCMS - RESULTS

ATI I.D. : 00652408

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-09-41
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/29/90
 DATE RECEIVED : 06/29/90
 DATE EXTRACTED : 07/03/90
 DATE ANALYZED : 07/13/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	84
p,p'-DDE (%)	84
TOLUENE-D8 (%)	90

MCK0003326



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00652407

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003327

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 006524
 DATE EXTRACTED : 07/03/90
 DATE ANALYZED : 07/12/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.35
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	115
BFB (%)	123
TOLUENE-D8 (%)	122

MCK0003328



Analytical**Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00652408

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003329

GCMS - RESULTS
REAGENT BLANK
TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 006524
PROJECT #	: 17333.157.11	DATE EXTRACTED	: 07/03/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/12/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.4
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
ETHYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	104
TOLUENE-D8 (%)	103

MCK0003330

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 005524

UNITS : MG/KG

COMPOUNDE	RESULTS
NONE DETECTED	N/A

MCK0003331

QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 006524

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : REAGENT SOIL

 DATE EXTRACTED : 07/03/90
 DATE ANALYZED : 07/12/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					SPIKED	% REC.	
1,1-DICHLOROETHENE	<0.05	2.10	1.68	80	1.59	76	5
TRICHLOROETHENE	<0.05	2.90	2.08	72	2.42	83	14
CHLOROBENZENE	<0.05	2.60	2.60	100	2.68	103	3
TOLUENE	<0.1	2.60	2.28	88	2.74	105	18
BENZENE	<0.05	2.40	2.17	90	2.35	98	6

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003332

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006524

UNITS : MG/KG

COMPOUNDE	RESULTS
NONE DETECTED	N/A

MCK0003333

GCMS - RESULTS
ATI I.D. : 00652401
TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/05/90
CLIENT I.D.	: MK-SB-06-26	DATE ANALYZED	: 07/12/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROBODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
1-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
1,4-DINITROPHENOL	<0.85
2,4-DINITROPHENOL	<0.85
DIBENZOOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003334

GCMS - RESULTS

ATI I.D. : 00652401

LIST : EPA 8170 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(b)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(b,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	45
2-FLUOROBIPHENYL (%)	56
TERPHENYL (%)	47
PHENOL-D5 (%)	38
2-FLUOROPHENOL (%)	29
2,4,6-TRIBROMOPHENOL (%)	46

MCK0003335



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00706202

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003336



GCMS - RESULTS

ATI I.D. : 00706202

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-23-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/05/90
DATE RECEIVED : 07/06/90
DATE EXTRACTED : 07/09/90
DATE ANALYZED : 07/18/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, such as CHLOROMETHANE <0.50, METHYLENE CHLORIDE 30, and TOLUENE 0.63.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Surrogate Name and Percent Recovery. Includes 2-DICHLOROETHANE-D4 (%), B (%), and TOLUENE-D8 (%).

MCK0003337

TR - Compound detected at an unquantifiable trace level



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00706201

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003338

GCMS - RESULTS

ATI I.D. : 00705201

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-23-26
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/05/90
 DATE RECEIVED : 07/06/90
 DATE EXTRACTED : 07/09/90
 DATE ANALYZED : 07/19/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	93
B (%)	103
TOLUENE-D8 (%)	101

MCK0003339

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 007062

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : 00708702

 DATE EXTRACTED : 07/11/90
 DATE ANALYZED : 07/11/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SAMPLE REC.	SAMPLE REC.	
ETHYLENE GLYCOL	<2.0	40.0	28	70	28	70	0
DIETHYLENE GLYCOL	<2.0	20.0	9.3	47	8.5	43	9
PROPYLENE GLYCOL	<2.0	20.0	16	80	16	80	0
HEXYLENE GLYCOL	<2.0	40.0	28	70	28	70	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003340

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 007062

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 REF I.D. : REAGENT SOIL

 DATE EXTRACTED : 07/11/90
 DATE ANALYZED : 07/11/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					SPIKED	%	
ETHYLENE GLYCOL	<2.0	40.0	36	90	N/A	N/A	N/A
DIETHYLENE GLYCOL	<2.0	20.0	17	85	N/A	N/A	N/A
PROPYLENE GLYCOL	<2.0	20.0	19	95	N/A	N/A	N/A
HEXYLENE GLYCOL	<2.0	40.0	36	90	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003341



REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007062
DATE EXTRACTED : 07/11/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00705202

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/05/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 07/06/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/09/90
CLIENT I.D.	: MK-SB-23-41	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003343

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00706201

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-23-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/05/90
DATE RECEIVED : 07/06/90
DATE EXTRACTED : 07/09/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDSRESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003344



METALS - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS

ATI I.D. : 007062

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE, SPIKE CONC, % REC. Rows include IRON, POTASSIUM, MANGANESE, SODIUM, and ZINC.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100

MCK0003345



METALS RESULTS

ATI I.D. : 007062

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/06/90

REPORT DATE : 07/31/90

PARAMETER	UNITS	03	04
IRON	MG/KG	27770	30430
POTASSIUM	MG/KG	2650	5520
MANGANESE	MG/KG	298	725
SODIUM	MG/KG	574	246
ZINC	MG/KG	59.9	59.8

MCK0003346



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007062

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE, SPIKE CONC, % REC. Rows include Chloride, Fluoride, Nitrate as Nitrogen, Petroleum Hydrocarbons, PH, and Sulfate.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100



GENERAL CHEMISTRY RESULTS

ATI I.D. : 007062

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/06/90

REPORT DATE : 07/31/90

PARAMETER	UNITS	01	02	03	04
CHLORIDE	MG/KG	-	-	424	<5
FLUORIDE	MG/KG	-	-	7	<5
NITRATE AS NITROGEN	MG/KG	-	-	4.0	3.6
PETROLEUM HYDROCARBONS, IR	MG/KG	<1	5	-	-
PH	UNITS	-	-	8.0	7.9
SULFATE	MG/KG	-	-	303	<100

MCK0003348



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
OBJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 007062

DATE RECEIVED : 07/05/90
REPORT DATE : 07/31/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-23-26	SOIL	07/05/90
02	MK-SB-23-41	SOIL	07/05/90
03	MK-SB-21-6	SOIL	07/05/90
04	MK-SB-21-36	SOIL	07/05/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003349



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
pH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003350



Analytical **Technologies, Inc.**

Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

000084

3.4.1

ATI I.D. 007062

July 31, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

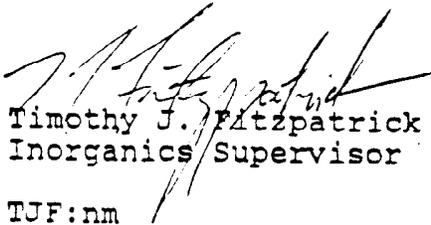
Project Name: McKesson Santa Fe Springs

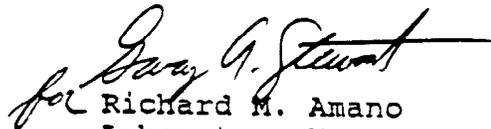
Project No.: 17333,157.11

Attention: Burton Chadwick

On July 6, 1990, Analytical Technologies, Inc. received four soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor
TJF:nm


for Richard M. Amano
Laboratory Manager

MCK0003351

007042

CHAIN OF CUSTODY FORM

Lab: **ATF**

Samplers: Dr Johnson

Job Number: 17333157.11

Name/Location: McKesson Sante Fe Springs

Project Manager: B. Chadwick

Recorder: B. Chadwick

SOURCE	MATRIX				#CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER				DATE			STATION DESCRIPTION/ NOTES
	Water	Sediment	Soil	Oil		Yr	Wk	Seq	Yr	Mo	Dy	Time	
50	X	X	X	X					90	07	03		MX-SB-17-15
50	X	X	X	X					90	07	03		MX-SB-17-41
50	X	X	X	X					90	07	03		MX-SB-18-15
50	X	X	X	X					90	07	03		MX-SB-18-41

by 306/0/2010
M.K.F.
N.Z.K.F.

ANALYSIS REQUESTED	
EPA 601/8010	X
EPA 602/8020	X
EPA 624/8240	X
EPA 625/8270	X
Priority Plint. Metals	X
Benzene/Toluene/Xylene	X
Total Petrol. Hydrocarb.	X

LAB NUMBER	DEPTH IN FEET		COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD				
	Yr	Wk				Seq	RECEIVED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
MCK0003352						RECEIVED BY: (Signature)	7/5/90	16	45	
						RECEIVED BY: (Signature)	7/5/90	16	45	
						RECEIVED BY: (Signature)	7/5/90	16	45	
						RECEIVED BY: (Signature)	7/5/90	16	45	



METALS - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007042

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE CONC, SPIKE CONC, % REC. Rows include IRON, POTASSIUM, MANGANESE, SODIUM, and ZINC.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100

MCK0003353



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 007042

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/05/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	01	02	03	04
IRON	MG/KG	20390	28650	19290	21760
POTASSIUM	MG/KG	3180	4570	3800	4300
MANGANESE	MG/KG	598	494	312	317
SODIUM	MG/KG	945	320	2860	267
ZINC	MG/KG	69.7	71.2	48.9	65.0

MCK0003354

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

PROJECT # : 17333.157.11

PROJECT NAME : McKESSON SANTA FE SPRINGS

ATI I.D. : 007042

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/KG	00706204	<5	<5	0	739	667	111
FLUORIDE	MG/KG	00706204	25	<5	0	36	48	75
NITRATE AS NITROGEN	MG/KG	00704202	0.7	0.7	0	6.8	6.0	102
PH	UNITS	00711701	8.4	8.4	0	N/A	N/A	N/A
SULFATE	MG/KG	00718501	57.0	42.0	30	246	20	98

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

MCK0003355



GENERAL CHEMISTRY RESULTS

ATI I.D. : 007042

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/05/90

REPORT DATE : 07/27/90

PARAMETER	UNITS	01	02	03	04
CHLORIDE	MG/KG	12.2	1000	428	<5
FLUORIDE	MG/KG	19	6	55	8
NITRATE AS NITROGEN	MG/KG	1.0	0.7	6.5	1.0
PH	UNITS	4.4	7.8	8.4	8.1
SULFATE	MG/KG	8900	<100	6370	<100

MCK0003356



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 007042

DATE RECEIVED : 07/05/90
REPORT DATE : 07/27/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-17-1.5	SOIL	07/03/90
02	MK-SB-17-41	SOIL	07/03/90
03	MK-SB-18-1.5	SOIL	07/03/90
04	MK-SB-18-41	SOIL	07/03/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
pH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010

MCK0003358



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ATI I.D. 007042

July 27, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

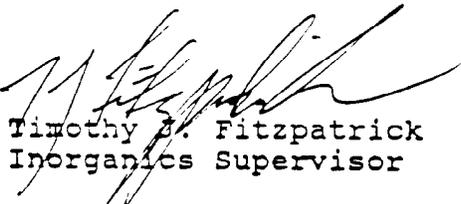
Project Name: McKesson Santa Fe Springs

Project No.: 17333-157.11

Attention: Burton Chadwick

On July 5, 1990, Analytical Technologies, Inc. received four soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:bc



Richard M. Amano
Laboratory Manager

MCK0003359

HLA
 Harding Lawson Associates
 15921 Redhill Avenue, Suite 100
 Tustin, California 92680
 714/259-7992 - 213/817-7232
 Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

Job Number: 17333157.11

Name/Location: DeWesson - Santa Fe Springs

Project Manager: Stephen Chedwick

Samplers: Don Johnson

Recorder: [Signature]
 (Signature Required)

0065 2X

205.21

Lab: ASX

ANALYSIS REQUESTED					
EPA 601/8010					
EPA 602/8020					
EPA 624/8240					
EPA 625/8220					
Priority Phtnt. Metals					
Benzene/Toluene/Xylene					
Total Petrol. Hydrocarb.					
ELISA Hydrocarb.					
Glycols by Distillate					
Other					

STATION DESCRIPTION/NOTES
MX-58-08-26
MX-58-08-42.5
MX-58-09-21
MX-58-09-41
<u>[Handwritten]</u>

SOURCE CODE	MATRIX	#CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			
			Yr	Wk	Seq	Yr	Mo	Dy	Time
55	Soil	X	10	6	29	10	6	29	
56	Sediment								
57	Water								
58	Oil								

LAB NUMBER			DEPTH IN FEET			COL MTD CD			OA CODE			MISCELLANEOUS			CHAIN OF CUSTODY RECORD			
Yr	Wk	Seq	IN	FEET	CD	CD	MTD	CD	OA	CODE	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME	DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
											<u>[Signature]</u>	<u>6/9/01 17:00</u>	<u>[Signature]</u>	<u>6/9/01 17:00</u>				
											<u>[Signature]</u>	<u>6/9/01 17:00</u>	<u>[Signature]</u>	<u>6/9/01 17:00</u>				
											<u>[Signature]</u>	<u>6/9/01 17:00</u>	<u>[Signature]</u>	<u>6/9/01 17:00</u>				
											<u>[Signature]</u>	<u>6/9/01 17:00</u>	<u>[Signature]</u>	<u>6/9/01 17:00</u>				
											<u>[Signature]</u>	<u>6/9/01 17:00</u>	<u>[Signature]</u>	<u>6/9/01 17:00</u>				

MCK0003360

CHAIN OF CUSTODY STUDY FORM

Lab: 006524
 1 of 2

Job Number: 17333157.11
 Name/Location: McKesson Santa Fe Springs
 Project Manager: B Chadwick

Samplers: Don Johnson
 Recorder: [Signature]

ANALYSIS REQUESTED	
EPA 601/8010	XXX
EPA 602/8020	XXX
EPA 624/8240	XXX
EPA 625/8270	XXX
ICP METALS	XXX
EPA 8015M/TPH	XXX
48.1 Hydrocarbons	XXX
Hydrocarbons by GC/MS ethyle	XXX
Hydrocarbons by GC/MS methyle	XXX
PH 9045 Method	XXX
XXX	XXX
XXX	XXX
XXX	XXX

SOURCE CODE	MATRIX		# CONTAINERS & PRESERV.		SAMPLE NUMBER OR LAB NUMBER		DATE			STATION DESCRIPTION/NOTES	
	Water	Sediment	Oil	Unpres.	H ₂ SO ₄	HNO ₃	Yr	Mo	Dy		Time
59	X			X			90	06	28	1430	MX-SB-06-20
											MX-SB-06-40
											MX-SB-07-20
											MX-SB-07-40

LAB NUMBER		DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD	
Yr	Seq					RECEIVED BY: (Signature)	DATE/TIME
1	1					<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90
						<u>[Signature]</u>	6/28/90

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 006524

CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/05/90

PROJECT # : 17333.157.11 DATE ANALYZED : 07/12/90

PROJECT NAME : McKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL

REF I.D. : 00652408 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED	%	
1,2,4-TRICHLOROBENZENE	<0.17	3.3	1.8	55	1.7	52	6
ACENAPHTHENE	<0.17	3.3	1.9	58	2.1	64	9
2,4-DINITROTOLUENE	<0.17	3.3	2.6	79	2.5	76	4
PYRENE	<0.17	3.3	2.5	76	2.4	73	4
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	2.1	63	2.1	64	2
1,4-DICHLOROBENZENE	<0.17	3.3	1.8	55	1.7	52	6
PENTACHLOROPHENOL	<0.85	13.2	8.1	61	7.6	58	5
PHENOL	<0.17	6.6	3.7	56	3.8	58	4
2-CHLOROPHENOL	<0.17	6.6	3.9	45	3.9	59	27
4-CHLORO-3-METHYLPHENOL	<0.17	6.6	3.6	54	3.6	54	0
4-NITROPHENOL	<0.85	13.2	13.2	100	11.8	89	12

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003362

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 006524

UNITS : MG/KG

COMPOUNDS

RESULTS

442 ALIPHATIC HYDROCARBON C7	0.8
1610 ALIPHATIC HYDROCARBON C9	1
2231 ALIPHATIC HYDROCARBON C25	0.6
2283 ALIPHATIC HYDROCARBON C26	0.6
2343 ALIPHATIC HYDROCARBON C26	0.5

MCK0003363

GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 006524

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLENYLPHTHALATE	<0.17
3,3-DICHLOROSESQUIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	TR<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	55
2-FLUOROBIPHENYL (%)	62
TERPHENYL (%)	47
PHENOL-D6 (%)	41
2-FLUOROPHENOL (%)	49
2,4,6-TRIBROMOPHENOL (%)	54

TR - Compound detected at an unquantifiable trace level

MCK0003364

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 006524
PROJECT #	: 17333.157.11	DATE EXTRACTED	: 07/05/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/11/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
1-NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
1-BENZOFURAN	<0.17
4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	TR<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003365

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00652408

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

GCMS - RESULTS

ATI I.D. : 00652408

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
BYSENE	<0.17
-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D6 (%)	39
2-FLUOROBIPHENYL (%)	50
TERPHENYL (%)	41
PHENOL-D6 (%)	30
2-FLUOROPHENOL (%)	39
2,4,6-TRIBROMOPHENOL (%)	44

MCK0003367

GCMS - RESULTS

ATI I.D. : 00652408

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/05/90
CLIENT I.D.	: MK-SB-09-41	DATE ANALYZED	: 07/11/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSDIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003368



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

EST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00652407

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003369

GCMS - RESULTS

ATI I.D. : 00652407

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	82
2-FLUOROBIPHENYL (%)	84
TERPHENYL (%)	70
PHENOL-D6 (%)	63
2-FLUOROPHENOL (%)	66
2,4,6-TRICHOLOPHENOL (%)	71

MCK0003370

GCMS - RESULTS

ATI I.D. : 00652407

TEST : EPA 8070 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17303,157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/05/90
CLIENT I.D.	: MK-SB-09-21	DATE ANALYZED	: 07/12/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
1-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZO FURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYL PHTHALATE	<0.17

MCK0003371



Analytical **Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00652406

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003372



Analytical **Technologies**, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00552405

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003373



GCMS - RESULTS

ATI I.D. : 00652405

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	37
2-FLUORODIPHENYL (%)	50
TERPHENYL (%)	46
PHENOL-D6 (%)	34
2-FLUOROPHENOL (%)	43
2,4,6-TRIBROMOPHENOL (%)	60

MCK0003374

GCMS - RESULTS

ATI I.D. : 00652405

TEST : EPA 8170 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-08-26
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 06/29/90
 DATE RECEIVED : 06/29/90
 DATE EXTRACTED : 07/05/90
 DATE ANALYZED : 07/12/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
O-METHYLPHENOL	<0.17
S(2-CHLOROPROPYL) ETHER	<0.17
P-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROCYCLOHEPTANE	<0.17
NITROBENZENE	<0.17
ISOPHTHALENE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
1-NAPHTHENE	<0.17
4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003375



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00652404

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDE

RESULTS

NONE DETECTED

N/A

MCK0003376



GCMS - RESULTS

ATI I.D. : 00652404

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZOYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
RYSENE	<0.17
1,1-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D6 (%)	45
2-FLUOROBIPHENYL (%)	55
TERPHENYL (%)	46
PHENOL-D6 (%)	39
2-FLUOROPHENOL (%)	48
2,4,6-TRIBROMOPHENOL (%)	65

MCK0003377

GCMS - RESULTS

ATI I.D. : 00652404

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/05/90
CLIENT I.D.	: MK-SB-07-46	DATE ANALYZED	: 07/12/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSCIN METHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
METHYLPHENOL	<0.17
N-NITROSCIN-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003378



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00552403

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003379

GCMS - RESULTS

ATI I.D. : 00652403

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(b)ANTHRACENE	<0.17
BIS(2-ETHYLHENYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(b)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	44
2-FLUORODIPHENYL (%)	54
TERPHENYL (%)	42
PHENOL-D6 (%)	38
2-FLUOROPHENOL (%)	40
2,4,6-TRIBROMOPHENOL (%)	50

MCK0003380

GCMS - RESULTS

ATI I.D. : 00652403

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17323,157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/05/90
CLIENT I.D.	: MK-SB-07-26	DATE ANALYZED	: 07/12/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSDIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
S(2-CHLOROISOPROPYL)ETHER	<0.17
METHYLPHENOL	<0.17
N-NITROSDI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORDNE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003381



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00652402

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003382



GCMS - RESULTS

ATI I.D. : 00652402

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBIENENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
RYSENE	<0.17
1,1-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	35
2-FLUOROBIPHENYL (%)	50
TERPHENYL (%)	45
PHENOL-D6 (%)	27
2-FLUOROPHENOL (%)	28
2,4,6-TRIBROMOPHENOL (%)	43

MCK0003383



GCMS - RESULTS

ATI I.D. : 00652402

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 06/29/90
PROJECT #	: 17000.157.11	DATE RECEIVED	: 06/29/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/05/90
CLIENT I.D.	: MK-SB-06-46	DATE ANALYZED	: 07/12/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSDIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
3(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
1-NAPHTHENE	<0.17
4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003384



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00652401

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003385

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 007062
PROJECT #	: 17333.157.11	DATE EXTRACTED	: 07/09/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/19/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
BFB (%)	105
TOLUENE-D8 (%)	104

MCK0003386

TR - Compound detected at an unquantifiable trace level

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007062

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003387

QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) ATI I.D. : 007062
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/09/90
 PROJECT # : 17333.157.11 DATE ANALYZED : 07/13/90
 PROJECT NAME : McKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : REAGENT SOIL UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED %	DUP. DUP.		RPD	
	RESULT	SPIKED		SAMPLE REC.	SAMPLE REC.		
1,1-DICHLOROETHENE	<0.05	2.10	1.77	84	1.84	88	5
TRICHLOROETHENE	<0.05	2.90	2.38	82	2.60	90	9
CHLOROBENZENE	<0.05	2.60	2.54	98	2.79	107	9
TOLUENE	<0.10	2.60	2.48	95	2.50	96	1
BENZENE	<0.05	2.40	2.08	87	2.32	97	11

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003388



GCMS - RESULTS

ATI I.D. : 00706201

TEST #: EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/05/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/06/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/10/90
CLIENT I.D.	: MK-SB-23-26	DATE ANALYZED	: 07/20/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
-----------	---------

N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003389

EST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLORO BENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
1-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	53
2-FLUOROBIPHENYL (%)	59
TERPHENYL (%)	46
PHENOL-D6 (%)	57
2-FLUOROPHENOL (%)	48
2,4,6-TRIBROMOPHENOL (%)	61



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00706201

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

941 ALIPHATIC HYDROCARBON C10

0.2

2158 ALIPHATIC HYDROCARBON C26

0.2

MCK0003391

GCMS - RESULTS

ATI I.D. : 00706202

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-23-41
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/05/90
 DATE RECEIVED : 07/06/90
 DATE EXTRACTED : 07/10/90
 DATE ANALYZED : 07/20/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
NITROPHENOL	<0.85
.BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003392



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	60
2-FLUOROBIPHENYL (%)	61
TERPHENYL (%)	52
PHENOL-D6 (%)	56
2-FLUOROPHENOL (%)	57
2,4,6-TRIBROMOPHENOL (%)	64

MCK0003393



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00705202

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

917 CYCLIC HYDROCARBON C5

0.2

940 ALIPHATIC HYDROCARBON C10

0.3

1853 BRANCHED BENZAMIDE

1

MCK0003394



GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 007052
PROJECT #	: 17333,157.11	DATE EXTRACTED	: 07/10/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/20/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLORCANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003395

(CONTINUED NEXT PAGE)



GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 007052

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,b)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	57
2-FLUOROBIPHENYL (%)	68
TERPHENYL (%)	52
PHENOL-D5 (%)	71
2-FLUOROPHENOL (%)	75
2,4,6-TRIBROMOPHENOL (%)	68

MCK0003396

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007062

UNITS : MG/KG

COMPOUNDS

RESULTS

1584 ALIPHATIC HYDROCARBON C18

1

1817 CARBOXYLIC ACID

7

MCK0003397

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) **ATI I.D. :** 007062
CLIENT : HARDING LAWSON ASSOC.-TUSTIN **DATE EXTRACTED :** 07/10/90
PROJECT # : 17333,157.11 **DATE ANALYZED :** 07/20/90
PROJECT NAME : McKESSON SANTA FE SPRINGS **SAMPLE MATRIX :** SOIL
REF I.D. : 00707209 **UNITS :** MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SAMPLE REC.	SAMPLE REC.	
1,2,4-TRICHLOROBENZENE	<0.17	3.3	3.2	96	3.1	95	1
ACENAPHTHENE	<0.17	3.3	3.4	104	3.4	102	2
2,4-DINITROTOLUENE	<0.17	3.3	2.5	76	2.8	84	10
PYRENE	<0.17	3.3	4.0	120	4.2	127	6
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	9.2	*	6.0	*	42*
1,4-DICHLOROBENZENE	<0.17	3.3	3.0	92	3.0	91	1
PENTACHLOROPHENOL	<0.85	13.2	13.6	103	13.8	104	1
PHENOL	<0.17	6.6	5.5	84	5.3	81	4
2-CHLOROPHENOL	<0.17	6.6	5.3	81	5.5	83	2
4-CHLORO-3-METHYLPHENOL	<0.17	6.6	6.1	93	6.0	91	2
4-NITROPHENOL	<0.85	13.2	8.0	60	8.3	63	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to sample matrix interference

MCK0003398



Analytical Technologies, Inc.

Corporate Offices 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

000005

3.4.1

ATI I.D. 007087

July 31, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333,157.11

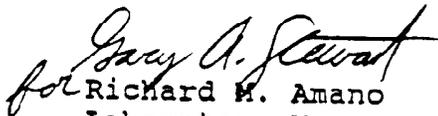
Attention: Burton Chadwick

On July 9, 1990, Analytical Technologies, Inc. received two soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nm


for Richard M. Amano
Laboratory Manager

MCK0003400

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003401



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
OBJECT # : 17333.157.11
OBJECT NAME : McKESSON SANTA FE SPRINGS
ATI I.D. : 007087

DATE RECEIVED : 07/09/90
REPORT DATE : 07/31/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-03-31	SOIL	07/06/90
02	MK-SB-03-21	SOIL	07/06/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	2

MCK0003402

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical **Technologies**, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007087

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/09/90

REPORT DATE : 07/31/90

PARAMETER	UNITS	01	02
PETROLEUM HYDROCARBONS. IR	MG/KG	<1	<2

MCK0003403



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

PROJECT # : 17333.157.11

PROJECT NAME : McKESSON SANTA FE SPRINGS

ATI I.D. : 007087

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE CONC	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	00711201	570	550	4	650	106	80

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

MCK0003404



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00708701

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-03-31
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/06/90
DATE RECEIVED : 07/09/90
DATE EXTRACTED : 07/10/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003405



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007087
DATE EXTRACTED : 07/11/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003406



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00708702

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-03-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/06/90
DATE RECEIVED : 07/09/90
DATE EXTRACTED : 07/10/90
DATE ANALYZED : 07/11/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003407

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 007087

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : REAGENT SOIL

 DATE EXTRACTED : 07/11/90
 DATE ANALYZED : 07/11/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED	%	
ETHYLENE GLYCOL	<2.0	40.0	36	90	N/A	N/A	N/A
DIETHYLENE GLYCOL	<2.0	20.0	17	85	N/A	N/A	N/A
PROPYLENE GLYCOL	<2.0	20.0	19	95	N/A	N/A	N/A
HEXYLENE GLYCOL	<2.0	40.0	36	90	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003408

QUALITY CONTROL DATA

TEST : GLYCOLS ATI I.D. : 007087
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/11/90
 PROJECT # : 17333,157.11 DATE ANALYZED : 07/11/90
 PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : 00708702 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED %	DUP. %		RPD
	RESULT	SPIKED		SAMPLE REC.	SAMPLE REC.	
ETHYLENE GLYCOL	<2.0	40.0	28	70	28	0
DIETHYLENE GLYCOL	<2.0	20.0	9.3	47	8.5	9
PROPYLENE GLYCOL	<2.0	20.0	16	80	16	0
HEXYLENE GLYCOL	<2.0	40.0	28	70	28	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003409

GCMS - RESULTS

ATI I.D. : 00708701

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-03-31
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/06/90
 DATE RECEIVED : 07/09/90
 DATE EXTRACTED : 07/10/90
 DATE ANALYZED : 07/20/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.92
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	0.20
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	0.16
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.50
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.25
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	83
B (%)	79
TOLUENE-DB (%)	84

MCK0003410



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00708701

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003411

GCMS - RESULTS

ATI I.D. : 00708702

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-03-21
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/06/90
 DATE RECEIVED : 07/09/90
 DATE EXTRACTED : 07/10/90
 DATE ANALYZED : 07/21/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.25
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	80
B (%)	78
TOLUENE-DB (%)	81

MCK0003412



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00708702

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003413

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 007087
 DATE EXTRACTED : 07/10/90
 DATE ANALYZED : 07/20/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.52
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
PERFLUOROBON TETRACHLORIDE	<0.05
ETHYL VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	91
TOLUENE-D8 (%)	94

MCK0003414

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 007087
 DATE EXTRACTED : 07/11/90
 DATE ANALYZED : 07/22/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003415

GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 007087

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	46
2-FLUOROBIPHENYL (%)	51
TERPHENYL (%)	49
PHENOL-D6 (%)	49
2-FLUOROPHENOL (%)	36
2,4,6-TRIBROMOPHENOL (%)	56

MCK0003416

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007087

UNITS : MG/KG

COMPOUNDS

RESULTS

418 ALIPHATIC HYDROCARBON C10

0.4

1595 ALIPHATIC HYDROCARBON C19

0.5

MCK0003417

QUALITY CONTROL DATA
ATI I.D. : 007087
TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)
CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
REF I.D. : 00710008
DATE EXTRACTED : 07/11/90
DATE ANALYZED : 07/24/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<10	3.3	1.7	52	1.8	55	6
ACENAPHTHENE	<10	3.3	1.8	56	2.1	64	13
2,4-DINITROTOLUENE	<10	3.3	2.4	73	2.5	76	4
PYRENE	<10	3.3	2.0	61	2.1	64	5
N-NITROSO-DI-N-PROPYLAMINE	<10	3.3	1.4	42	1.6	48	13
1,4-DICHLOROBENZENE	<10	3.3	1.6	48	1.8	54	12
PENTACHLOROPHENOL	<50	13.2	10.6	80	11.0	83	4
PHENOL	<10	6.6	2.9	44	3.4	52	17
2-CHLOROPHENOL	<10	6.6	3.5	53	4.0	61	14
4-CHLORO-3-METHYLPHENOL	<10	6.6	2.4	36	3.1	47	27
-NITROPHENOL	<50	13.2	11.7	89	11.2	85	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical **Technologies, Inc.**

Corporate Offices 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

003296

3.4.1

ATI I.D. 007120

August 2, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

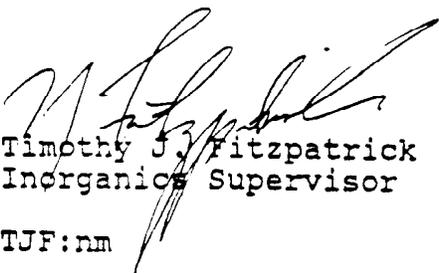
Project Name: McKesson Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick

On July 10, 1990, Analytical Technologies, Inc. received two soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nm


For: Richard M. Amano
Laboratory Manager

MCK0003420

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003421



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
ATI I.D. : 007120

DATE RECEIVED : 07/10/90
REPORT DATE : 08/02/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-21-21'	SOIL	07/05/90
02	MK-SB-21-31'	SOIL	07/05/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	2

MCK0003422

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007120

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/10/90

REPORT DATE : 08/02/90

PARAMETER	UNITS	01	02
PETROLEUM HYDROCARBONS, IR	MG/KG	2	<1

MCK0003423



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007120

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE CONC	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	00712001	2	2	0	110	100	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

MCK0003424

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00712001

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-21-21'
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/05/90
DATE RECEIVED : 07/10/90
DATE EXTRACTED : 07/12/90
DATE ANALYZED : 07/19/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDSRESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003425

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00712002

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-21-31'
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/05/90
DATE RECEIVED : 07/10/90
DATE EXTRACTED : 07/12/90
DATE ANALYZED : 07/19/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003426



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 007120
PROJECT #	: 17333.157.11	DATE EXTRACTED	: 07/18/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/19/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003427



QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 007120

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
REF I.D. : 00723003

DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/19/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SAMPLE CONC. SPIKED, SPIKED SAMPLE, % SPIKED REC., DUP. % SPIKED REC., DUP. % SPIKED REC., RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

QUALITY CONTROL DATA

TEST : GLYCOLS ATI I.D. : 007120
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/18/90
 PROJECT # : 17333.157.11 DATE ANALYZED : 07/19/90
 PROJECT NAME : McKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : REAGENT SOIL UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	DUP. % SPIKED		RPD
	RESULT	SPIKED		REC.SAMPLE	REC.	
ETHYLENE GLYCOL	<2.0	40.0	36	90	35	88
DIETHYLENE GLYCOL	<2.0	20.0	20	100	20	100
PROPYLENE GLYCOL	<2.0	20.0	20	100	20	100
HEXYLENE GLYCOL	<2.0	40.0	36	90	35	88

$$\text{\% Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

GCMS - RESULTS

ATI I.D. : 00712001

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-21-21'
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/05/90
 DATE RECEIVED : 07/10/90
 DATE EXTRACTED : 07/12/90
 DATE ANALYZED : 07/19/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
?-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	94
B (%)	102
TOLUENE-D8 (%)	104

MCK0003430



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00712001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003431

GCMS - RESULTS

ATI I.D. : 00712002

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-21-31'
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/05/90
 DATE RECEIVED : 07/10/90
 DATE EXTRACTED : 07/12/90
 DATE ANALYZED : 07/19/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	1.1
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	74
BFB (%)	98
TOLUENE-DB (%)	95

MCK0003432



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00712002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003433

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 007120
 DATE EXTRACTED : 07/12/90
 DATE ANALYZED : 07/19/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
PERFLUOROCARBON TETRACHLORIDE	<0.05
ETHYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,1,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	97
BFB (%)	110
TOLUENE-D8 (%)	105

ND - Compound detected at an unquantifiable trace level

MCK0003434



Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007120

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003435

QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) ATI I.D. : 007120
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/09/90
 PROJECT # : 17333.157.11 DATE ANALYZED : 07/13/90
 PROJECT NAME : McKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : REAGENT SOIL UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED %	DUP. %		RPD	
	RESULT	SPIKED		SAMPLE REC.	SAMPLE REC.		
1,1-DICHLOROETHENE	<0.05	2.10	1.77	84	1.84	88	5
TRICHLOROETHENE	<0.05	2.90	2.38	82	2.60	90	9
CHLOROBENZENE	<0.05	2.60	2.54	98	2.79	107	9
TOLUENE	<0.10	2.60	2.48	95	2.50	96	1
BENZENE	<0.05	2.40	2.08	87	2.32	97	11

$$\text{\% Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003436



GCMS - RESULTS

ATI I.D. : 00712001

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333.157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-21-21'
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/05/90
DATE RECEIVED : 07/10/90
DATE EXTRACTED : 07/11/90
DATE ANALYZED : 07/22/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.17.

MCK0003437



LIST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
-N-OCTYLPHthalATE	<0.17
NZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	61
2-FLUOROBIPHENYL (%)	59
TERPHENYL (%)	37
PHENOL-D6 (%)	64
2-FLUOROPHENOL (%)	63
2,4,6-TRIBROMOPHENOL (%)	56

MCK0003438



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00712001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003439

GCMS - RESULTS

ATI I.D. : 00712002

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/05/90
PROJECT #	: 17333.157.11	DATE RECEIVED	: 07/10/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/11/90
CLIENT I.D.	: MK-SB-21-31'	DATE ANALYZED	: 07/22/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
LIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHthalate	<0.17

MCK0003440

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	54
2-FLUOROBIPHENYL (%)	56
TERPHENYL (%)	34
PHENOL-D5 (%)	53
2-FLUOROPHENOL (%)	50
2,4,6-TRIBROMOPHENOL (%)	51

MCK0003441



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00712002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003442

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 007120
PROJECT #	: 17333.157.11	DATE EXTRACTED	: 07/11/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/22/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003443



GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 007120

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
RYSENE	<0.17
-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	46
2-FLUOROBIPHENYL (%)	51
TERPHENYL (%)	49
PHENOL-D6 (%)	49
2-FLUOROPHENOL (%)	36
2,4,6-TRIBROMOPHENOL (%)	56

MCK0003444

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007120

UNITS : MG/KG

COMPOUNDS

RESULTS

418 ALIPHATIC HYDROCARBON C10

0.4

1595 ALIPHATIC HYDROCARBON C19

0.5

MCK0003445

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 007120
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/11/90
 PROJECT # : 17333,157.11 DATE ANALYZED : 07/27/90
 PROJECT NAME : McKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : 00712001 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED	%	
1,2,4-TRICHLOROBENZENE	<0.17	3.3	1.3	39	1.3	39	0
ACENAPHTHENE	<0.17	3.3	1.3	39	1.3	39	0
2,4-DINITROTOLUENE	<0.17	3.3	1.1	33*	1.1	33*	0
PYRENE	<0.17	3.3	1.5	45	1.5	45	0
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	1.4	42	1.4	42	0
1,4-DICHLOROBENZENE	<0.17	3.3	1.4	42	1.4	42	0
PENTACHLOROPHENOL	<0.85	13.2	7.1	54	7.1	54	0
PHENOL	<0.17	6.6	2.4	36	2.6	39	8
2-CHLOROPHENOL	<0.17	6.6	2.7	45	3.0	45	0
4-CHLORO-3-METHYLPHENOL	<0.17	6.6	1.8	27	2.0	30	11
NITROPHENOL	<0.85	13.2	6.2	47	6.0	45	4

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to sample matrix interference

007120

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 - 213/617-7232
Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

Samplers: Don Johnson

Job Number: 17333, 157.11

Name/Location: McKesson Santa Fe Springs

Project Manager: B. Chadwick Recorder: Don Johnson

(Signature Required)

CODR	MATRIX			# CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			STATION DESCRIPTION/NOTES	
	Water	Sediment	Soil		Yr	Wk	Seq	Yr	Mo	Dy		Time
20	X			Unpres.				90	07	05		MK-58-21-21'
50	X			H ₂ O ₂				90	07	05		MK-58-21-51'

ANALYSIS REQUESTED	
EPA 601/8010	<input checked="" type="checkbox"/>
EPA 602/8020	<input checked="" type="checkbox"/>
EPA 624/8240	<input checked="" type="checkbox"/>
EPA 625/8270	<input checked="" type="checkbox"/>
ICP METALS	<input checked="" type="checkbox"/>
EPA 8015M/TPH	<input checked="" type="checkbox"/>

LAB NUMBER	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD		
					RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
					<u>Don Johnson</u>	<u>Don Johnson</u>	<u>6/30/90</u>
					<u>Bob DeBry</u>	<u>Bob DeBry</u>	<u>6/30/90</u>
					<u>Bob DeBry</u>	<u>Bob DeBry</u>	<u>6/30/90</u>
				METHOD OF SHIPMENT	<u>1 gal under custody seal on cooler</u>		



Analytical Technologies, Inc.

Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

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3-4-1

ATI I.D. 007171

August 9, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

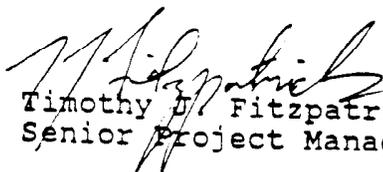
Project Name: McKesson Santa Fe Springs

Project No.: 17333-158.11

Attention: Burton Chadwick

On July 12, 1990, Analytical Technologies, Inc. received six soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.


Timothy J. Fitzpatrick
Senior Project Manager
TJF:bc


Richard M. Amano
Laboratory Manager

MCK0003448



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,158.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)/ CDOHS METHOD
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003449



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 007171

DATE RECEIVED : 07/12/90

REPORT DATE : 08/09/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-24-1	SOIL	07/11/90
02	MK-SB-24-21	SOIL	07/11/90
03	MK-SB-24-41	SOIL	07/11/90
04	MK-SB-30-1.5	SOIL	07/12/90
05	MK-SB-30-21	SOIL	07/12/90
06	MK-SB-30-41	SOIL	07/12/90

----- TOTALS -----

MATRIX	# SAMPLES
-----	-----
SOIL	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003450



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007171

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/12/90

REPORT DATE : 08/09/90

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, IR	MG/KG	3100	600	30	170	140

MCK0003451



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007171

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/12/90

REPORT DATE : 08/09/90

PARAMETER	UNITS	06
PETROLEUM HYDROCARBONS, IR	MG/KG	<1

MCK0003452



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007171

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	00717003	35	33	6	140	106	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

MCK0003453



ATI I.D. : 00717101

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/11/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/17/90
CLIENT I.D.	: MK-SB-24-1	DATE ANALYZED	: 07/20/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	9.5
DIETHYLENE GLYCOL	2.1
PROPYLENE GLYCOL	6.8
HEXYLENE GLYCOL	6.0

MCK0003454



Analytical **Technologies**, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00717102

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/11/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/17/90
CLIENT I.D.	: MK-SB-24-21	DATE ANALYZED	: 07/20/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	6.5
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003455



ATI I.D. : 00717103

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-24-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/11/90
DATE RECEIVED : 07/12/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003456



ATI I.D. : 00717104

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-30-1.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/12/90
DATE RECEIVED : 07/12/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003457



ATI I.D. : 00717105

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-30-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/12/90
DATE RECEIVED : 07/12/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003458



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00717106

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/12/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/17/90
CLIENT I.D.	: MK-SB-30-41	DATE ANALYZED	: 07/20/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003459



REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007171
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/19/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003460



QUALITY CONTROL DATA

ATI I.D. : 007171

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/19/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SPIKED SAMPLE, SPIKED % REC., DUP. SAMPLE, DUP. % REC., RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample - Duplicate Spike) / Average of Spiked Sample X 100

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 007171

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : 00723003

 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/19/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED RESULT	SPIKED SAMPLE	DUP. \ DUP.		RPD
	RESULT	SPIKED			% REC.	% REC.	
ETHYLENE GLYCOL	<2.0	40.0	9.9	25	8.8	22	13
DIETHYLENE GLYCOL	<2.0	20.0	3.0	15	3.2	13	14
PROPYLENE GLYCOL	<2.0	20.0	14	70	13	65	7
HEXYLENE GLYCOL	<2.0	40.0	9.9	25	8.8	22	13

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003462



QUALITY CONTROL DATA

ATI I.D. : 007171

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
REF I.D. : 00725703

DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/19/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003463

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 007171

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : REAGENT SOIL

 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/19/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED	% REC.	
ETHYLENE GLYCOL	<2.0	40.0	35	88	35	88	0
DIETHYLENE GLYCOL	<2.0	20.0	20	100	20	100	0
PROPYLENE GLYCOL	<2.0	20.0	20	100	20	100	0
HEXYLENE GLYCOL	<2.0	40.0	35	88	35	88	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003464

GCMS - RESULTS

ATI I.D. : 00717101

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/11/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/13/90
CLIENT I.D.	: MK-SB-24-1	DATE ANALYZED	: 07/25/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 25

COMPOUNDS	RESULTS
CHLOROMETHANE	<12
BROMOMETHANE	<12
VINYL CHLORIDE	<1.2
CHLOROETHANE	<1.2
METHYLENE CHLORIDE	<7.5
ACETONE	<25
CARBON DISULFIDE	<1.2
1,1-DICHLOROETHENE	<1.2
1,1-DICHLOROETHANE	<1.2
1,2-DICHLOROETHENE (TOTAL)	<1.2
CHLOROFORM	<1.2
1,2-DICHLOROETHANE	<1.2
2-BUTANONE (MEK)	<25
1,1,1-TRICHLOROETHANE	160
CARBON TETRACHLORIDE	<1.2
VINYL ACETATE	<12
BROMODICHLOROMETHANE	<1.2
1,1,2,2-TETRACHLOROETHANE	<1.2
1,2-DICHLOROPROPANE	<1.2
TRANS-1,3-DICHLOROPROPENE	<1.2
TRICHLOROETHENE	3.5
DIBROMOCHLOROMETHANE	<1.2
1,1,2 TRICHLOROETHANE	<1.2
BENZENE	<1.2
CIS-1,3-DICHLOROPROPENE	<1.2
BROMOFORM	<7.5
2-HEXANONE (MBK)	<12
4-METHYL-2-PENTANONE (MIBK)	<12
TETRACHLOROETHENE	33
TOLUENE	78
CHLOROBENZENE	11
ETHYL BENZENE	<1.2
STYRENE	<1.2
TOTAL XYLENES	<1.2

SURROGATE PERCENT RECOVERIES

MCK0003465

1,2-DICHLOROETHANE-D4 (%)	**
BFB (%)	**
TOLUENE-D8 (%)	**

** Due to the necessary dilution of the sample, result was not attainable



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00717101

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

343 TRICHLOROTRIFLUOROETHANE
827 AROMATIC HYDROCARBON
911 AROMATIC HYDROCARBON
938 AROMATIC HYDROCARBON

8
400
90
100

MCK0003466



ATI I.D. : 00717102

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-24-21
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/11/90
 DATE RECEIVED : 07/12/90
 DATE EXTRACTED : 07/13/90
 DATE ANALYZED : 07/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 40

COMPOUNDS	RESULTS
CHLOROMETHANE	<20
BROMOMETHANE	<20
VINYL CHLORIDE	<2.0
CHLOROETHANE	<2.0
METHYLENE CHLORIDE	<12
ACETONE	120
CARBON DISULFIDE	<2.0
1,1-DICHLOROETHENE	<2.0
1,1-DICHLOROETHANE	<2.0
1,2-DICHLOROETHENE (TOTAL)	<2.0
CHLOROFORM	<2.0
1,2-DICHLOROETHANE	6.4
2-BUTANONE (MEK)	65
1,1,1-TRICHLOROETHANE	530
CARBON TETRACHLORIDE	82
VINYL ACETATE	<20
BROMODICHLOROMETHANE	<2.0
1,1,2,2-TETRACHLOROETHANE	5.9
1,2-DICHLOROPROPANE	<2.0
TRANS-1,3-DICHLOROPROPENE	<2.0
TRICHLOROETHENE	33
DIBROMOCHLOROMETHANE	<2.0
1,1,2 TRICHLOROETHANE	<2.0
BENZENE	<2.0
CIS-1,3-DICHLOROPROPENE	<2.0
BROMOFORM	<12
2-HEXANONE (MBK)	<20
4-METHYL-2-PENTANONE (MIBK)	<20
TETRACHLOROETHENE	630
TOLUENE	130
CHLOROBENZENE	<2.0
ETHYL BENZENE	31
STYRENE	<2.0
TOTAL XYLENES	160

MCK0003467

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%) **
 BFB (%) **
 TOLUENE-D8 (%) **

** Due to the necessary dilution of the sample, result was not attainable



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00717102

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

338 FREON 113

200

847 OCTANE

20

MCK0003468



GCMS - RESULTS

ATI I.D. : 00717103

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/11/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/13/90
CLIENT I.D.	: MK-SB-24-41	DATE ANALYZED	: 07/26/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1.0
CHLOROETHANE	<1.0
METHYLENE CHLORIDE	48
ACETONE	<20
CARBON DISULFIDE	<1.0
1,1-DICHLOROETHENE	5
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
CHLOROFORM	<1.0
1,2-DICHLOROETHANE	<1.0
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	100
CARBON TETRACHLORIDE	<1.0
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1.0
1,1,2,2-TETRACHLOROETHANE	<1.0
1,2-DICHLOROPROPANE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
TRICHLOROETHENE	6
DIBROMOCHLOROMETHANE	<1.0
1,1,2 TRICHLOROETHANE	<1.0
BENZENE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
BROMOFORM	<6.0
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	58
TOLUENE	12
CHLOROBENZENE	<1.0
ETHYL BENZENE	1.8
STYRENE	<1.0
TOTAL XYLENES	8.6

MCK0003469

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	84
BFB (%)	121*
TOLUENE-D8 (%)	114

* Result out of limits due to sample matrix interference



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

MT : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00717103

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003470

GCMS - RESULTS

ATI I.D. : 00717104

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-30-1.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/12/90
 DATE RECEIVED : 07/12/90
 DATE EXTRACTED : 07/13/90
 DATE ANALYZED : 07/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 400

COMPOUNDS	RESULTS
CHLOROMETHANE	<200
BROMOMETHANE	<200
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	380
ACETONE	<400
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	<20
1,1-DICHLOROETHANE	<20
1,2-DICHLOROETHENE (TOTAL)	<20
CHLOROFORM	<20
1,2-DICHLOROETHANE	32
2-BUTANONE (MEK)	<400
1,1,1-TRICHLOROETHANE	3500
CARBON TETRACHLORIDE	550
VINYL ACETATE	<200
BROMODICHLOROMETHANE	<20
1,1,2,2-TETRACHLOROETHANE	31
1,2-DICHLOROPROPANE	<20
TRANS-1,3-DICHLOROPROPENE	<20
TRICHLOROETHENE	60
DIBROMOCHLOROMETHANE	<20
1,1,2 TRICHLOROETHANE	<20
BENZENE	<20
CIS-1,3-DICHLOROPROPENE	<20
BROMOFORM	<120
2-HEXANONE (MBK)	<200
4-METHYL-2-PENTANONE (MIBK)	<200
TETRACHLOROETHENE	2900
TOLUENE	110
CHLOROBENZENE	170
ETHYL BENZENE	50
STYRENE	<20
TOTAL XYLENES	90

MCK0003471

SURROGATE PERCENT RECOVERIES

 1,2-DICHLOROETHANE-D4 (%) **
 BFB (%) **
 TOLUENE-D8 (%) **

** Due to the necessary dilution of the sample, result was not attainable



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00717104

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

339 FREON 113

2000

MCK0003472

GCMS - RESULTS

ATI I.D. : 00717105

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-30-21
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/12/90
 DATE RECEIVED : 07/12/90
 DATE EXTRACTED : 07/13/90
 DATE ANALYZED : 07/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 120

COMPOUNDS	RESULTS
CHLOROMETHANE	<60
BROMOMETHANE	<60
VINYL CHLORIDE	<6.0
CHLOROETHANE	<6.0
METHYLENE CHLORIDE	120
ACETONE	<120
CARBON DISULFIDE	<6.0
1,1-DICHLOROETHENE	<6.0
1,1-DICHLOROETHANE	<6.0
1,2-DICHLOROETHENE (TOTAL)	<6.0
CHLOROFORM	<6.0
1,2-DICHLOROETHANE	<6.0
2-BUTANONE (MEK)	<120
1,1,1-TRICHLOROETHANE	190
CARBON TETRACHLORIDE	30
VINYL ACETATE	<60
BROMODICHLOROMETHANE	<6.0
1,1,2,2-TETRACHLOROETHANE	<6.0
1,2-DICHLOROPROPANE	<6.0
TRANS-1,3-DICHLOROPROPENE	<6.0
TRICHLOROETHENE	17
DIBROMOCHLOROMETHANE	<6.0
1,1,2 TRICHLOROETHANE	<6.0
BENZENE	<6.0
CIS-1,3-DICHLOROPROPENE	<6.0
BROMOFORM	<36
2-HEXANONE (MBK)	<60
4-METHYL-2-PENTANONE (MIBK)	<60
TETRACHLOROETHENE	1000
TOLUENE	83
CHLOROBENZENE	<6.0
ETHYL BENZENE	15
STYRENE	<6.0
TOTAL XYLENES	60

MCK0003473

SURROGATE PERCENT RECOVERIES

 1,2-DICHLOROETHANE-D4 (%) **
 BFB (%) **
 TOLUENE-D8 (%) **

** Due to the necessary dilution of the sample, result was not attainable



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00717105

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003474



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-30-41
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/12/90
 DATE RECEIVED : 07/12/90
 DATE EXTRACTED : 07/13/90
 DATE ANALYZED : 07/26/90
 UNITS : MG/KG
 DILUTION FACTOR : 2

COMPOUNDS	RESULTS
CHLOROMETHANE	<1.0
BROMOMETHANE	<1.0
VINYL CHLORIDE	<0.10
CHLOROETHANE	<0.10
METHYLENE CHLORIDE	17
ACETONE	<2.0
CARBON DISULFIDE	<0.10
1,1-DICHLOROETHENE	5.4
1,1-DICHLOROETHANE	<0.10
1,2-DICHLOROETHENE (TOTAL)	<0.10
CHLOROFORM	<0.10
1,2-DICHLOROETHANE	<0.10
2-BUTANONE (MEK)	<2.0
1,1,1-TRICHLOROETHANE	3.4
CARBON TETRACHLORIDE	0.5
VINYL ACETATE	<1.0
BROMODICHLOROMETHANE	<0.10
1,1,2,2-TETRACHLOROETHANE	<0.10
1,2-DICHLOROPROPANE	<0.10
TRANS-1,3-DICHLOROPROPENE	<0.10
TRICHLOROETHENE	2.6
DIBROMOCHLOROMETHANE	<0.10
1,1,2 TRICHLOROETHANE	<0.10
BENZENE	<0.10
CIS-1,3-DICHLOROPROPENE	<0.10
BROMOFORM	<0.6
2-HEXANONE (MBK)	<1.0
4-METHYL-2-PENTANONE (MIBK)	<1.0
TETRACHLOROETHENE	7.4
TOLUENE	0.3
CHLOROBENZENE	<0.10
ETHYL BENZENE	<0.10
STYRENE	<0.10
TOTAL XYLENES	<0.10

SURROGATE PERCENT RECOVERIES

MCK0003475

1,2-DICHLOROETHANE-D4 (%)	93
BFB (%)	92
TOLUENE-D8 (%)	80



Analytical **Technologies, Inc.**

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00717106

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003476



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,158.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007171
DATE EXTRACTED : 07/13/90
DATE ANALYZED : 07/25/90
UNITS : MG/KG
DILUTION FACTOR : N/A

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, such as CHLOROMETHANE <0.50, BROMOMETHANE <0.50, etc.

SURROGATE PERCENT RECOVERIES

MCK0003477

Table with 2 columns: Surrogate Name and Percent Recovery. Includes 1,2-DICHLOROETHANE-D4 (%), BFB (%), and TOLUENE-D8 (%).



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007171

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003478



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007171
 DATE EXTRACTED : 07/13/90
 DATE ANALYZED : 07/26/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.7
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	100
TOLUENE-D8 (%)	101

MCK0003479



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007171

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003480



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007171
 DATE EXTRACTED : 07/13/90
 DATE ANALYZED : 07/25/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.5
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	104
BFB (%)	108
TOLUENE-D8 (%)	106

MCK0003481



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007171

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003482

QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) ATI I.D. : 007171
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/13/90
 PROJECT # : 17333,158.11 DATE ANALYZED : 07/25/90
 PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : REAGENT SOIL UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	DUP. % SPIKED		RPD	
	RESULT	SPIKED		SAMPLE REC.	SAMPLE REC.		
1,1-DICHLOROETHENE	<0.05	2.00	1.9	95	1.9	95	0
TRICHLOROETHENE	<0.05	2.80	2.7	96	2.9	104	8
CHLOROBENZENE	<0.05	2.50	2.6	104	2.7	108	4
TOLUENE	<0.05	2.50	2.5	100	2.7	108	8
BENZENE	<0.05	2.50	2.1	84	2.2	88	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003483

GCMS - RESULTS

ATI I.D. : 00717101

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/11/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/13/90
CLIENT I.D.	: MK-SB-24-1	DATE ANALYZED	: 08/02/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
1-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
1,1,1-TRICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	6.9
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	4.3
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
1-BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003484

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	53
2-FLUOROBIPHENYL (%)	66
TERPHENYL (%)	79
PHENOL-D6 (%)	55
2-FLUOROPHENOL (%)	77
2,4,6-TRIBROMOPHENOL (%)	55

MCK0003485



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00717101

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
519 ALIPHATIC HYDROCARBON C8	10
567 TRIMETHYLBENZENE	7
652 ALIPHATIC HYDROCARBON C10	9
943 ALIPHATIC HYDROCARBON C12	10
1043 ALIPHATIC HYDROCARBON C13	10
300-2500 TOTAL EXTRACTABLE HYDROCARBONS C8-C28	400

MCK0003486

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/11/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/13/90
CLIENT I.D.	: MK-SB-24-21	DATE ANALYZED	: 08/03/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSDIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	2.7
--CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
1-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	1.0
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003487



ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	69
2-FLUOROBIPHENYL (%)	66
TERPHENYL (%)	77
PHENOL-D6 (%)	41
2-FLUOROPHENOL (%)	60
2,4,6-TRIBROMOPHENOL (%)	59

MCK0003488



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00717102

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
514 ALIPHATIC HYDROCARBON C8	20
561 TRIMETHYLBENZENE	8
623 ALIPHATIC HYDROCARBON C9	8
649 ALIPHATIC HYDROCARBON C9	10
665 ALIPHATIC HYDROCARBON C10	10
300-2500 TOTAL EXTRACTABLE HYDROCARBONS C8-C28	200

MCK0003489

GCMS - RESULTS

ATI I.D. : 00717103

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/11/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/13/90
CLIENT I.D.	: MK-SB-24-41	DATE ANALYZED	: 08/03/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
1,1-DICHLOROETHANE	<0.17
1,4-DIBROMOBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	TR<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
BENZOFURAN	<0.17
4-DINITROFLUORENE	<0.17
2,6-DINITROFLUORENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003490

 TR - Compound detected at an unquantifiable trace level
 (CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	52
2-FLUOROBIPHENYL (%)	56
TERPHENYL (%)	59
PHENOL-D6 (%)	52
2-FLUOROPHENOL (%)	53
2,4,6-TRIBROMOPHENOL (%)	59

MCK0003491



ANalytical**Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00717103

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

507 ETHYLMETHYLBENZENE	0.5
1880 AROMATIC HYDROCARBON	0.3
2464 ALIPHATIC HYDROCARBON C28	0.9

MCK0003492



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/12/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/13/90
CLIENT I.D.	: MK-SB-30-1.5	DATE ANALYZED	: 08/03/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	0.24
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003493



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	55
2-FLUOROBIPHENYL (%)	66
TERPHEHYL (%)	80
PHENOL-D6 (%)	35
2-FLUCROPHENOL (%)	47
2,4,5-TRIBROMOPHENOL (%)	7*

* Result out of limits due to sample matrix interference

MCK0003494



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	1.4
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	65
2-FLUOROBIPHENYL (%)	72
TERPHENYL (%)	76
PHENOL-D6 (%)	66
2-FLUOROPHENOL (%)	5*
2,4,6-TRIBROMOPHENOL (%)	68

* Result out of limits due to sample matrix interference

MCK0003495



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00717105

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
462 ALIPHATIC HYDROCARBON C8	20
505 BENZALDEHYDE	1
553 TRIMETHYLBENZENE	1
814 BUTYL CARBITOL	1
850 PHENOXY ETHANOL	3
200-1100 TOTAL EXTRACTABLE HYDROCARBONS C7-C14	70

MCK0003496

GCMS - RESULTS

ATI I.D. : 00717106

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/12/90
PROJECT #	: 17333,158.11	DATE RECEIVED	: 07/12/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/13/90
CLIENT I.D.	: MK-SB-30-41	DATE ANALYZED	: 08/03/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
--CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
--CHLORO-3-METHYLPHENOL	<0.17
1-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003497

(CONTINUED NEXT PAGE)



ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	55
2-FLUOROBIPHENYL (%)	62
TERPHENYL (%)	71
PHENOL-D6 (%)	50
2-FLUOROPHENOL (%)	48
2,4,6-TRIBROMOPHENOL (%)	56

MCK0003498



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00717106

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

422 BUTYL CELLOSOLVE

1

MCK0003499



REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 007171
PROJECT #	: 17333,158.11	DATE EXTRACTED	: 07/13/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE ANALYZED	: 08/02/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
1-NITROBENZENE	<0.17
2-NITROBENZENE	<0.17
4-NITROBENZENE	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
1-CHLOROANILINE	<0.17
2-CHLOROANILINE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
1,2,4,6-TRICHLOROPHENOL	<0.17
1,2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFPURAN	<0.17
1,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
1,2-DIMETHYLPHthalate	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003500

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHENYL) PHTHALATE	TR<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	48
2-FLUOROBIPHENYL (%)	54
1,4-DIBROMOBIPHENYL (%)	72
PHENOL-D6 (%)	46
2-FLUOROPHENOL (%)	44
2,4,6-TRIBROMOPHENOL (%)	52

TR - Compound detected at an unquantifiable trace level



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007171

UNITS : MG/KG

COMPOUNDS

RESULTS

442 ALIPHATIC HYDROCARBON C7

0.5

MCK0003502

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 007171

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,158.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : 00707703

 DATE EXTRACTED : 07/17/90
 DATE ANALYZED : 08/03/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					SPIKED SAMPLE	% REC.	
1,2,4-TRICHLOROBENZENE	<0.17	3.3	2.6	79	2.0	61	26
ACENAPHTHENE	<0.17	3.3	2.2	67	1.8	55	20
2,4-DINITROTOLUENE	<0.17	3.3	2.2	67	1.8	55	20
PYRENE	<0.17	3.3	2.1	64	1.8	55	15
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	1.7	52	1.4	42	19
1,4-DICHLOROBENZENE	<0.17	3.3	2.0	61	1.4	42	35
PENTACHLOROPHENOL	<0.85	13.2	9.2	69	7.9	59	15
PHENOL	<0.17	6.7	2.5	37	2.2	33	13
2-CHLOROPHENOL	<0.17	6.7	3.5	52	2.9	43	19
4-CHLORO-3-METHYLPHENOL	<0.17	6.7	2.9	44	2.7	40	7
4-NITROPHENOL	<0.85	13.2	5.0	38	4.4	32	17

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003503

CHAIN OF CUSTODY FORM

Job Number: 17333, 158.11
 Name/Location: McKesson Santa Fe Springs
 Project Manager: B Chadwick
 Samplers: Don Johnson
 Recorder: [Signature]

SOURCE CODE	MATRIX			CONTAINERS & PRESERV.		SAMPLE NUMBER OR LAB NUMBER			DATE			STATION DESCRIPTION/NOTES	
	Water	Sediment	Soil	Oil	Unpres.	Yr	Wk	Seq	Yr	Mo	Dy		Time
20	X				X	90	07	11	Am				MK-5B-29-1
20	X				X	90	07	11	Am				MK-5B-24-21
20	X				X	90	07	11	Am				MK-5B-29-41
20	X				X	90	07	12	Am				MK-5B-30-1.5
20	X				X	90	07	12	Am				MK-5B-30-21
50	X				X	90	07	12	Am				MK-5B-30-41

ANALYSIS REQUESTED												
EPA 601.8010												
EPA 602.8020	X	X	X	X	X	X	X	X	X	X	X	X
EPA 624/8240	X	X	X	X	X	X	X	X	X	X	X	X
EPA 625/8270	X	X	X	X	X	X	X	X	X	X	X	X
ICP METALS												
EPA 8015M/TPH												

CHAIN OF CUSTODY RECORD												
RELEINQUISHED BY: (Signature)						RECEIVED BY: (Signature)						DATE/TIME
[Signature]						[Signature]						11/29/90
RELEINQUISHED BY: (Signature)						RECEIVED BY: (Signature)						DATE/TIME
[Signature]						[Signature]						11/29/90
RELEINQUISHED BY: (Signature)						RECEIVED BY: (Signature)						DATE/TIME
[Signature]						[Signature]						
DISPATCHED BY: (Signature)						RECEIVED FOR LAB BY: (Signature)						DATE/TIME
[Signature]						[Signature]						
METHOD OF SHIPMENT												
Courier w/ custody seal on order												



Analytical Technologies, Inc.

Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

003600

3.4.1

ATI I.D. 007230

August 13, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick

On July 16, 1990, Analytical Technologies, Inc. received six soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

CAS, tes
for: Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nm

Richard M. Amano
Laboratory Manager

MCK0003505

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
pH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
IRON	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003506



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 007230

DATE RECEIVED : 07/16/9
REPORT DATE : 08/13/9

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-20-11	SOIL	07/13/90
02	MK-SB-20-20.5	SOIL	07/13/90
03	MK-SB-20-41	SOIL	07/13/90
04	MK-SB-25-6	SOIL	07/13/90
05	MK-SB-25-21	SOIL	07/13/90
06	MK-SB-25-41	SOIL	07/13/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	6

MCK0003507

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



ATI I.D. : 007230

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/16/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/KG	399	184	<5	-	-
FLUORIDE	MG/KG	<5	<5	<5	-	-
NITRATE AS NITROGEN	MG/KG	128	91.8	78.8	-	-
PETROLEUM HYDROCARBONS, IR	MG/KG	<1	<1	1	1	<1
PH	UNITS	7.9	7.7	8.3	-	-
SULFATE	MG/KG	139	<100	<100	-	-

MCK0003508



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007230

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/16/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	06
PETROLEUM HYDROCARBONS, IR	MG/KG	<1

MCK0003509



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007230

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/KG	00721703	19600	19100	3	19900	400	138
FLUORIDE	MG/KG	00728306	12	13	8	60	48	98
NITRATE AS NITROGEN	MG/KG	00723003	78.8	73.7	7	**	**	**
PETROLEUM HYDROCARBONS	MG/KG	00722202	4	4	0	110	103	103
PH	UNITS	00723608	8.1	8.1	0	N/A	N/A	N/A
SULFATE	MG/KG	00728302	<100	<100	0	211	200	106

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable



ATI-I.D. : 007230

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/16/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	01	02	03
IRON	MG/KG	18020	8030	22900
POTASSIUM	MG/KG	2990	1070	3270
MANGANESE	MG/KG	587	421	337
SODIUM	MG/KG	289	183	321
ZINC	MG/KG	51.4	23.4	70.2

MCK0003511



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007230

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE, SPIKE CONC, % REC. Rows include IRON, POTASSIUM, MANGANESE, SODIUM, and ZINC.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100

** Due to the necessary dilution of the sample, result was not attainable

MCK0003512



ATI I.D. : 00723001

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-20-11
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
DATE RECEIVED : 07/16/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003513



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00723002

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-20-20.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
DATE RECEIVED : 07/16/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003514



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00723003

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-20-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
DATE RECEIVED : 07/16/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL <2.0
DIETHYLENE GLYCOL <2.0
PROPYLENE GLYCOL <2.0
HEXYLENE GLYCOL <2.0

MCK0003515



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00723004

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/13/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/16/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/17/90
CLIENT I.D.	: MK-SB-25-6	DATE ANALYZED	: 07/20/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003516



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00723005

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-25-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
DATE RECEIVED : 07/16/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003517



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00723006

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-25-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
DATE RECEIVED : 07/16/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDSRESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003518



REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007230
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/19/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003519



QUALITY CONTROL DATA

ATI I.D. : 007230

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
REF I.D. : 00723003

DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/19/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SPIKED CONCENTRATION, SPIKED % SAMPLE REC., DUP. SPIKED % SAMPLE REC., DUP. SPIKED % SAMPLE REC., RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

GCMS - RESULTS

ATI I.D. : 00723001

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-20-11
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/13/90
 DATE RECEIVED : 07/16/90
 DATE EXTRACTED : 07/17/90
 DATE ANALYZED : 07/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
3 (%)	110
TOLUENE-D8 (%)	90

MCK0003521



ANALYTICAL TECHNOLOGIES, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00723001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
580 ALIPHATIC HYDROCARBON	0.6
604 ALIPHATIC HYDROCARBON	2
637 ALIPHATIC HYDROCARBON	3
655 ALIPHATIC HYDROCARBON	7
682 ALIPHATIC HYDROCARBON	1

MCK0003522



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-20-20.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
 DATE RECEIVED : 07/16/90
 DATE EXTRACTED : 07/17/90
 DATE ANALYZED : 07/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MIBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
3 (%)	114
TOLUENE-D8 (%)	102



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00723002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003524



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT = : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-20-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
DATE RECEIVED : 07/16/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/27/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding concentration results.

SUPROGATE PERCENT RECOVERIES

Table with 2 columns: Compound name and Percent recovery value.

MCK0003525



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00723003

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003526



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-25-6
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
 DATE RECEIVED : 07/16/90
 DATE EXTRACTED : 07/17/90
 DATE ANALYZED : 07/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 2

COMPOUNDS	RESULTS
CHLOROMETHANE	<1.0
BROMOMETHANE	<1.0
VINYL CHLORIDE	<0.10
CHLOROETHANE	<0.10
METHYLENE CHLORIDE	3.5
ACETONE	19
CARBON DISULFIDE	<0.10
1,1-DICHLOROETHENE	<0.10
1,1-DICHLOROETHANE	0.3
1,2-DICHLOROETHENE (TOTAL)	<0.10
CHLOROFORM	<0.10
1,2-DICHLOROETHANE	0.2
2-BUTANONE (MEK)	<2.0
1,1-TRICHLOROETHANE	0.1
CARBON TETRACHLORIDE	<0.10
VINYL ACETATE	<1.0
BROMODICHLOROMETHANE	<0.10
1,1,2,2-TETRACHLOROETHANE	<0.10
1,2-DICHLOROPROPANE	<0.10
TRANS-1,3-DICHLOROPROPENE	<0.10
TRICHLOROETHENE	<0.10
DIBROMOCHLOROMETHANE	<0.10
1,1,2-TRICHLOROETHANE	<0.10
BENZENE	<0.10
CIS-1,3-DICHLOROPROPENE	<0.10
BROMOFORM	<0.6
2-HEXANONE (MBK)	<1.0
4-METHYL-2-PENTANONE (MIBK)	<1.0
TETRACHLOROETHENE	0.1
TOLUENE	0.1
CHLOROBENZENE	<0.10
ETHYL BENZENE	<0.10
STYRENE	<0.10
TOTAL XYLENES	<0.10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (‰)	89
1 (‰)	88
TUENE-D8 (‰)	91

MCK0003527



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00723004

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003528



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT = : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-25-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
DATE RECEIVED : 07/16/90
DATE EXTRACTED : 07/17/90
DATE ANALYZED : 07/27/90
UNITS : MG/KG
DILUTION FACTOR : 2

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding concentration results.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Surrogate compound name and Percent Recovery value.

MCK0003529



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00723005

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003530



ATI I.D. : 00723006

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-25-41
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
 DATE RECEIVED : 07/16/90
 DATE EXTRACTED : 07/17/90
 DATE ANALYZED : 07/27/90
 UNITS : MG/KG
 DILUTION FACTOR : 3

COMPOUNDS	RESULTS
CHLOROMETHANE	<1.5
BROMOMETHANE	<1.5
VINYL CHLORIDE	<0.15
CHLOROETHANE	<0.15
METHYLENE CHLORIDE	3.0
ACETONE	3.5
CARBON DISULFIDE	<0.15
1,1-DICHLOROETHENE	0.7
1,1-DICHLOROETHANE	<0.15
1,2-DICHLOROETHENE (TOTAL)	0.6
CHLOROFORM	<0.15
1,2-DICHLOROETHANE	0.3
2-BUTANONE (MEK)	<3.0
1,1-TRICHLOROETHANE	<0.15
CARBON TETRACHLORIDE	<0.15
VINYL ACETATE	<1.5
BROMODICHLOROMETHANE	<0.15
1,1,2,2-TETRACHLOROETHANE	<0.15
1,2-DICHLOROPROPANE	<0.15
TRANS-1,3-DICHLOROPROPENE	<0.15
TRICHLOROETHENE	0.5
DIBROMOCHLOROMETHANE	<0.15
1,1,2-TRICHLOROETHANE	<0.15
BENZENE	<0.15
CIS-1,3-DICHLOROPROPENE	<0.15
BROMOFORM	<0.9
2-HEXANONE (MBK)	<1.5
4-METHYL-2-PENTANONE (MIBK)	<1.5
TETRACHLOROETHENE	0.6
TOLUENE	0.3
CHLOROBENZENE	<0.15
ETHYL BENZENE	<0.15
STYRENE	<0.15
TOTAL XYLENES	<0.15

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
B (%)	100
TOLUENE-D8 (%)	91

MCK0003531



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00723006

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003532



REAGENT BLANK

.ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007230
 DATE EXTRACTED : 07/17/90
 DATE ANALYZED : 07/26/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
1,1-DICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
1-HEXANONE (MIBK)	<0.50
1-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	116
TOLUENE-D8 (%)	102

MCK0003533



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007230

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003534



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT = : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007230
DATE EXTRACTED : 07/25/90
DATE ANALYZED : 07/27/90
UNITS : MG/KG
DILUTION FACTOR : N/A

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, such as CHLOROMETHANE <0.50, BROMOMETHANE <0.50, VINYL CHLORIDE <0.05, etc.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Surrogate Name and Percent Recovery. Includes 1,2-DICHLOROETHANE-D4 (%), EFB (%), and TOLUENE-D8 (%).



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007230

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A



QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 007230

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT = : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 07/20/90
DATE ANALYZED : 07/26/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SPIKED SAMPLE, DUP. % REC., RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

GCMS - RESULTS

ATI I.D. : 00723001

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-20-11
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/13/90
 DATE RECEIVED : 07/16/90
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 08/06/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
3-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003538



SE : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
1-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
4-NITROSODIPHENYLAMINE	<0.17
1-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	82
2-FLUOROBIPHENYL (%)	89
TERPHENYL (%)	86
PHENOL-D6 (%)	66
2-FLUOROPHENOL (%)	31
2,4,6-TRIBROMOPHENOL (%)	43

MCK0003539



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00723001

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003540



GCMS - RESULTS

ATI I.D. : 00723002

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/13/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/16/90
PROJECT NAME	: McKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/18/90
CLIENT I.D.	: MK-SB-20-20.5	DATE ANALYZED	: 08/06/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSDIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
NITROPHENOL	<0.85
BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003541



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	91
2-FLUOROBIPHENYL (%)	86
TERPHENYL (%)	79
PHENOL-D6 (%)	78
2-FLUOROPHENOL (%)	45
2,4,6-TRIBROMOPHENOL (%)	47

MCK0003542



ANalytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00723002

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003543

GCMS - RESULTS

ATI I.D. : 00723003

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/13/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/16/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/18/90
CLIENT I.D.	: MK-SB-20-41	DATE ANALYZED	: 08/08/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003544



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	81
2-FLUOROBIPHENYL (%)	64
TERPHENYL (%)	63
PHENOL-D6 (%)	65
2-FLUOROPHENOL (%)	38
2,4,6-TRIBROMOPHENOL (%)	33

MCK0003545



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00723003

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003546

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-25-6
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/13/90
 DATE RECEIVED : 07/16/90
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 08/08/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
NITROPHENOL	<0.85
1-BENZOFUPAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003547



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a) ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b) FLUORANTHENE	<0.17
BENZO(k) FLUORANTHENE	<0.17
BENZO(a) PYRENE	<0.17
INDENO(1,2,3-cd) PYRENE	<0.17
DIBENZO(a,h) ANTHRACENE	<0.17
BENZO(g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	70
2-FLUOROBIPHENYL (%)	70
TERPHENYL (%)	86
PHENOL-D6 (%)	66
2-FLUCROPHENOL (%)	43
2,4,6-TRIBROMOPHENOL (%)	49

MCK0003548



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00723004

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

GCMS - RESULTS

ATI I.D. : 00723005

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/13/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/16/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/18/90
CLIENT I.D.	: MK-SB-25-21	DATE ANALYZED	: 08/08/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITroso-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
3-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003550

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	104
2-FLUOROBIPHENYL (%)	84
TERPHENYL (%)	100
PHENOL-D6 (%)	83
2-FLUOROPHENOL (%)	58
2,4,6-TRIBROMOPHENOL (%)	51

MCK0003551



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00723005

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003552



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-25-41
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/13/90
 DATE RECEIVED : 07/16/90
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 08/08/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
-NITROSO-DI-N-PROPYLAMINE	<0.17
EXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
-NITROPHENOL	<0.85
IBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003553



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	89
1-FLUOROBIPHENYL (%)	69
TERPHENYL (%)	95
PHENOL-D6 (%)	67
2-FLUOROPHENOL (%)	34
2,4,6-TRIBROMOPHENOL (%)	42

MCK0003554



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00723006

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003555

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

 ATI I.D. : 007230
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 08/06/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003556

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TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSDIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHENYL) PHTHALATE	<0.17
CHRYSENE	<0.17
1-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	93
2-FLUOROBIPHENYL (%)	93
TERPHENYL (%)	85
PHENOL-D6 (%)	75
2-FLUOROPHENOL (%)	43
2,4,6-TRIBROMOPHENOL (%)	55

MCK0003557

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ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007230

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003558

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 007230
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/18/90
 PROJECT # : 17333,157.11 DATE ANALYZED : 08/09/90
 PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : 00723003 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP.		RPD
	RESULT	SPIKED			SPIKED SAMPLE	% REC.	
1,2,4-TRICHLOROBENZENE	<0.17	1.7	1.9	112	2.0	118	5
ACENAPHTHENE	<0.17	1.7	1.8	106	1.8	106	0
2,4-DINITROTOLUENE	<0.17	1.7	1.9	112	2.0	118	5
PYRENE	<0.17	1.7	1.8	106	1.8	106	0
N-NITROSO-DI-N-PROPYLAMINE	<0.17	1.7	1.8	106	1.9	112	5
1,4-DICHLOROBENZENE	<0.17	1.7	1.8	106	1.9	112	5
PENTACHLOROPHENOL	<0.85	13.3	10.3	77	10.0	75	3
PHENCL	<0.17	3.3	3.4	103	3.7	112	8
2-CHLOROPHENOL	<0.17	3.3	3.5	106	3.7	112	6
4-CHLORO-3-METHYLPHENOL	<0.17	3.3	3.9	118	4.1	124	5
4-NITROPHENCL	<0.85	13.3	12.4	93	11.6	87	7

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003559



Harding Lawson Associates
 15621 Redhill Avenue, Suite 100
 Tustin, California 92680
 714/259-7992 - 213/617-7232
 Telecopy: 714/259-1378

007230 CHAIN OF CUSTODY FORM

Job Number: 17333 157 "

Name/Location: McKesson Smt. Fe Springs

Project Manager: B Chadwick

Samplers: Dan Johnson

Recorder: [Signature]

SOURCE CODE	MATRIX				# CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			
	Water	Sediment	Soil	Oil		Yr	Wk	Seq	Yr	Mo	Dy	Time
50	X				X				90	07	13	AM
50	X				X				90	07	13	AM
50	X				X				90	07	13	AM
50	X				X				90	07	13	PM
50	X				X				90	07	13	PM

STATION DESCRIPTION/NOTES
MK-SB-20-11
MK-SB-20-20.5
MA-SB-20.41
MA-SB-25-6
MA-SB-25-21
MA-SB-25-11

Lab: SATI

ANALYSIS REQUESTED														
EPA 601/8010	X													
EPA 602/8020	X													
EPA 624/8240	X													
EPA 625/8270	X													
ICP METALS	X													
EPA 8015M/TPH	X													

LAB NUMBER	Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
[Signature]		[Signature]	[Date/Time]
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
[Signature]		[Signature]	[Date/Time]
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
[Signature]		[Signature]	[Date/Time]
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	DATE/TIME
[Signature]		[Signature]	[Date/Time]
DISPATCHED BY: (Signature)		RECEIVED FOR LAB BY: (Signature)	DATE/TIME
[Signature]		[Signature]	[Date/Time]

METHOD OF SHIPMENT: Courier w/ Custody Seal

Laboratory Copy White
 Project Office Copy Yellow
 Field or C. Pink



34.1

000003

ATI I.D. 007257

August 13, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick

On July 17, 1990, Analytical Technologies, Inc. received six soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. — The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

CAS:tes

for: Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:da

Richard M. Amano
Laboratory Manager

MCK0003561

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003562



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 007257

DATE RECEIVED : 07/17/90

REPORT DATE : 08/13/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-26-21	SOIL	07/16/90
02	MK-SB-26-26	SOIL	07/16/90
03	MK-SB-26-41	SOIL	07/16/90
04	MK-SB-27-21	SOIL	07/16/90
05	MK-SB-27-31	SOIL	07/16/90
06	MK-SE-27-41	SOIL	07/16/90

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003563



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007257

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/17/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, IR	MG/KG	<1	<1	<1	<1	9

MCK0003564



ATI I.D. : 007257

ENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/17/90

REPORT DATE : 08/13/90

PARAMETER UNITS 06

PETROLEUM HYDROCARBONS, IR MG/KG 1

MCK0003565



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS

ATI I.D. : 007257

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE CONC	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	00724416	130	130	0	230	115	83

$$\text{Recovery} = \frac{\text{Spike Sample Result} - (\text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{R.D. (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

MCK0003566



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00725701

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-26-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003567



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00725702

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC. - TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-26-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003568



ATI I.D. : 00725703

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-26-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 02/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00725704

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003570



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00725705

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-31
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003571



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00725706

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-41
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/20/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003572



REAGENT BLANK

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007257
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/19/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003573

QUALITY CONTROL DATA

TEST : GLYCOLS

ATI I.D. : 007257

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : 00725703

 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/19/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
					% SPIKED	% REC.	
ETHYLENE GLYCOL	<2.0	11.0	11	28	8.0	20	33
DIETHYLENE GLYCOL	<2.0	20.0	3.1	16	2.5	13	21
PROPYLENE GLYCOL	<2.0	20.0	15	75	13	65	14
HEXYLENE GLYCOL	<2.0	41.0	11	28	8.0	20	33

$$\text{Bias} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003574

QUALITY CONTROL DATA

ATI I.D. : 007257

TEST : GLYCOLS

 CLIENT : HARDING LAWSON ASSOC. - JUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : REAGENT SOIL

 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/19/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	CONC. SPIKED	SPIKED SAMPLE	DUP. % SPIKED		RPD
				REC. SAMPLE	REC.	
ETHYLENE GLYCOL	<1.0	40.0	35	88	35	0
DIETHYLENE GLYCOL	<2.0	20.0	20	100	20	0
PROPYLENE GLYCOL	<1.0	20.0	20	100	20	0
TETRAETHYLENE GLYCOL	<1.0	40.0	35	88	35	0

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



GCMS - RESULTS

ATI I.D. : 00725701

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-26-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/30/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding concentration results, such as CHLOROMETHANE <0.50, BROMOMETHANE <0.50, etc.

SPRIGATE PERCENT RECOVERIES

Table with 2 columns: Compound name and Percent recovery. Includes entries like 1,2-DICHLOROETHANE-D4 (%), BFB (%), and TOLUENE-D8 (%).

MCK0003576



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

METHOD : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00725701

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003577

GCMS - RESULTS

ATI I.D. : 00725702

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-26-26
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/16/90
 DATE RECEIVED : 07/17/90
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/30/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	3.8
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	0.1
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	0.2
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.07
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEF)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.07
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	95
TOLUENE-D8 (%)	99

MCK0003578



Advanced Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00725702

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003579



GCMS - RESULTS

ATI I.D. : 00725703

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-26-41
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
 DATE RECEIVED : 07/17/90
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/30/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	4.4
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	0.4
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	0.08
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	0.4
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	0.3
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-1-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	0.4
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURrogate PERCENT RECOVERIES

1,2-DICHLOROETHANE-D- (4)	84
BFB (4)	91
TOLUENE-D- (4)	96

MCK0003580



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00725703

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A



GCMS - RESULTS

ATI I.D. : 00725704

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/30/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	80
BFB (%)	100
TOLUENE-D8 (%)	106

MCK0003582



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

T : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00725704

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

203 PROPANONE

0.3

MCK0003583



GCMS - RESULTS

ATI I.D. : 00725705

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-31
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 07/31/90
UNITS : MG/KG
DILUTION FACTOR : 2.5

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding numerical results.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Surrogate Name and Percent Recovery. Lists 1,2-DICHLOROETHANE-D4, BFB, and TOLUENE-D8 with their respective recovery percentages.

MCK0003584



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

I : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00725705

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
NONE DETECTED	N/A

GCMS - RESULTS

ATI I.D. : 00725706

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-27-41
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/16/90
 DATE RECEIVED : 07/17/90
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : 4

COMPOUNDS	RESULTS
CHLOROMETHANE	<2.0
BROMOMETHANE	<2.0
VINYL CHLORIDE	<0.20
CHLOROETHANE	<0.20
METHYLENE CHLORIDE	26
ACETONE	<4.0
CARBON DISULFIDE	<0.20
1,1-DICHLOROETHENE	0.5
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
CHLOROFORM	<0.20
1,2-DICHLOROETHANE	<0.20
2-BUTANONE (MEK)	2.2
1,1,1-TRICHLOROETHANE	0.3
CARBON TETRACHLORIDE	<0.20
VINYL ACETATE	<2.0
BROMODICHLOROMETHANE	<0.20
1,1,2,2-TETRACHLOROETHANE	<0.20
1,2-DICHLOROPROPANE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
TRICHLOROETHENE	0.4
DIBROMOCHLOROMETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
BENZENE	<0.20
CIS-1,2-DICHLOROPROPENE	<0.20
BROMOFORM	<1.2
2-HEXANONE (MBK)	<2.0
4-METHYL-2-PENTANONE (MIBK)	<2.0
TETRACHLOROETHENE	0.8
TOLUENE	1
CHLOROBENZENE	<0.20
ETHYL BENZENE	<0.20
STYRENE	<0.20
TOTAL XYLENES	<0.20

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	78
BFB (%)	91
TOLUENE-D8 (%)	77

MCK0003586



Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

7 : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00725706

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003587

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 007257
PROJECT #	: 17333,157.11	DATE EXTRACTED	: 07/18/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE ANALYZED	: 07/30/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	TR<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MIBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
BFB (%)	100
TOLUENE-D8 (%)	106

MCK0003588

TR - Compound detected at an unquantifiable trace level

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007257

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003589



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007257
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.72
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
3-HEXANONE (MIBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	105
BFB (%)	106
TOLUENE-D8 (%)	105

MCK0003590



ATI I.D. : 007283

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/18/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	06	07	08
IRON	MG/KG	24580	22990	22800
POTASSIUM	MG/KG	3190	4210	4100
MANGANESE	MG/KG	416	222	346
SODIUM	MG/KG	306	340	295
ZINC	MG/KG	301	159	250

MCK0003591



ATI I.D. : 007283

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/18/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	01	02	03	04	05
COBALT	MG/KG	23400	26150	28340	26700	24310
POTASSIUM	MG/KG	3380	3620	4090	4050	4110
MANGANESE	MG/KG	522	528	428	294	494
SODIUM	MG/KG	294	340	319	286	316
ZINC	MG/KG	54.5	63.6	555	913	117

MCK0003592



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007283

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE AS CaCO3	MG/L	00730402	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CaCO3	MG/L		136	140	3	N/A	N/A	N/A
HYDROXIDE AS CaCO3	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS Ca	MG/L		136	140	3	N/A	N/A	N/A
CHLORIDE	MG/L	00730701	40	45	12	85	40	106
CHLORIDE	MG/KG	00728305	8.3	6.3	0	67.0	66.7	88
CONDUCTIVITY, UMHOS/CM	-	00730702	3030	3040	0	N/A	N/A	N/A
FLUORIDE	MG/L	00726301	<0.5	<0.5	0	4.9	5.0	98
FLUORIDE	MG/KG	00728306	12	13	8	60	48	98
SURFACTANTS	MG/L	00728309	<0.1	<0.1	0	0.9	1.0	90
NITRATE AS NITROGEN	MG/L	00728309	1.1	1.1	0	2.70	2.00	80
NITRATE AS NITROGEN	MG/KG	00728308	75.5	62.5	19	**	**	**
PETROLEUM HYDROCARBONS	MG/L	00723615	<0.05	<0.05	0	3.0	4.0	75
PETROLEUM HYDROCARBONS	MG/KG	00725421	<1	<1	0	98	99	99
PETROLEUM HYDROCARBONS	MG/KG	00717001	16	18	12	115	92	107
PH	UNITS	00730403	7.61	7.60	0	N/A	N/A	N/A
PH	UNITS	00728308	7.4	7.4	0	N/A	N/A	N/A
SULFATE	MG/L	00730702	1600	1490	7	2420	1000	88
SULFATE	MG/KG	00728302	<100	<100	0	211	200	106
SULFATE	MG/KG	00728301	<100	<100	0	209	200	105
TOTAL DISSOLVED SOLIDS	MG/L	00730401	2970	2960	0	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable



ATI I.D. : 007283

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/18/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	09
CARBONATE AS CaCO_3	MG/L	<5
BICARBONATE AS CaCO_3	MG/L	181
HYDROXIDE AS CaCO_3	MG/L	<5
TOTAL ALKALINITY AS CaCO_3	MG/L	181
CATION/ANION BALANCE	RATIO	1.02
CHLORIDE	MG/L	60
CONDUCTIVITY, $\mu\text{MHOS}/\text{CM}$	-	778
FLUORIDE	MG/L	<0.5
SURFACTANTS	MG/L	<0.1
NITRATE AS NITROGEN	MG/L	1.1
PETROLEUM HYDROCARBONS, IR	MG/L	0.06
PH	UNITS	7.91
SULFATE	MG/L	135
TOTAL DISSOLVED SOLIDS	MG/L	494

MCK0003594



ATI I.D. : 007283

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/18/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	06	07	08
CHLORIDE	MG/KG	24.7	37.6	12.5
FLUORIDE	MG/KG	12	10	13
NITRATE AS NITROGEN	MG/KG	95.4	109	75.5
PETROLEUM HYDROCARBONS, IR	MG/KG	710	290	840
PH	UNITS	7.8	6.9	7.4
SULFATE	MG/KG	<100	133	<100



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 007283

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT = : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS

DATE RECEIVED : 07/18/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/KG	<5	24.5	<5	8.3	8.3
FLUORIDE	MG/KG	15	11	6	8	8
NITRATE AS NITROGEN	MG/KG	77.6	144	157	72.6	98.4
PETROLEUM HYDROCARBONS, IR	MG/KG	14	13	1400	430	200
PH	UNITS	8.1	8.0	7.4	7.1	7.8
SULFATE	MG/KG	<100	<100	<100	<100	<100

MCK0003596



Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
ATI I.D. : 007283

DATE RECEIVED : 07/18/90
REPORT DATE : 08/13/90

Table with 4 columns: ATI #, CLIENT DESCRIPTION, MATRIX, DATE COLLECTED. Rows 01-10 showing sample details like MK-SS-01-05, SOIL, 07/17/90.

----- TOTALS -----

Summary table with 2 columns: MATRIX, # SAMPLES. Rows: WATER (2), SOIL (8).

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003597



ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: MCKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
ALKALINITY	TITRIMETRIC	EPA 310.1
CHLORIDE	COLORIMETRIC	EPA 325.2
CONDUCTIVITY	ELECTRODE	EPA 9050
FLUORIDE	ELECTRODE	EPA 340.2
HARDNESS	CALCULATION	EPA 6010
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1 (MODIFIED)
PH	ELECTRODE	EPA 9045
SULFATE	COLORIMETRIC	EPA 9036
SURFACTANTS	COLORIMETRIC	EPA 425.1
TOTAL DISSOLVED SOLIDS	GRAVIMETRIC	EPA 160.1
CALCIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
IRON	ICAP	EPA 6010
MAGNESIUM	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015 (MODIFIED)
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

MCK0003598

Sample 3-23-90



Analytical **Technologies, Inc.**

Corporate Offices 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

000007

34.1*
* also contains
water sample
collected for sample
water from onsite
supply.

ATI I.D. 007283

August 13, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333-157.11

Attention: Burton Chadwick

On July 18, 1990, Analytical Technologies, Inc. received two water and eight soil samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

CA Sites
for: Timothy J. Fitzpatrick
Senior Project Manager


Richard M. Amano
Laboratory Manager

TJF:bc

MCK0003599



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 007257

CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/18/90

PROJECT # : 17333,157.11 DATE ANALYZED : 08/09/90

PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL

REF I.D. : 00723003 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLORO BENZENE	<0.17	1.7	1.9	112	2.0	118	5
ACENAPHTHENE	<0.17	1.7	1.8	106	1.8	106	0
2,4-DINITRO TOLUENE	<0.17	1.7	1.9	112	2.0	118	5
PYRENE	<0.17	1.7	1.8	106	1.8	106	0
N-NITROSO-DI-N-PROPYLAMINE	<0.17	1.7	1.8	106	1.9	112	5
1,4-DICHLORO BENZENE	<0.17	1.7	1.8	106	1.9	112	5
PENTACHLOROPHENOL	<0.85	13.3	10.3	77	10.0	75	3
PHENOL	<0.17	3.3	3.4	103	3.7	112	8
2-CHLOROPHENOL	<0.17	3.3	3.5	106	3.7	112	6
4-CHLORO-3-METHYLPHENOL	<0.17	3.3	3.9	118	4.1	124	5
4-NITROPHENOL	<0.85	13.3	12.4	93	11.6	87	7

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003601

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007257

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003602



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO (a) ANTHRACENE	<0.17
BIS (2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO (b) FLUORANTHENE	<0.17
BENZO (k) FLUORANTHENE	<0.17
BENZO (a) PYRENE	<0.17
INDENO (1,2,3-cd) PYRENE	<0.17
BIBENZO (a,b) ANTHRACENE	<0.17
BENZO (g,h,i) PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

1,2,4-TRICHLOROBENZENE-D8 (%)	93
4-FLUOROBIPHENYL (%)	73
1,2-DIBIPHENYL (%)	15
PHENOL-D6 (%)	75
4-FLUOROPHENOL (%)	43
2,4,6-TRIBROMOPHENOL (%)	55



REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007257
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 08/06/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
1-PROBENZENE	<0.17
1-PHORONE	<0.17
1-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.25
BIS(2-CHLOROETHOXY) METHANE	<0.17
1,3-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
1-NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
1-CYCLOPENT-3-METHYLPHENOL	<0.17
1-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
1,4,6-TRICHLOROPHENOL	<0.17
1,2,3-TRICHLOROPHENOL	<0.25
1-CHLORONAPHTHALENE	<0.17
7-NITROANILINE	<0.25
DIMETHYL PHTHALATE	<0.17
1-NAPHTHYLENE	<0.17
1-NITROANILINE	<0.25
1-NAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.25
1-NITROPHENOL	<0.25
DIBENZOFPURAN	<0.17
1,4-DINITROTOLUENE	<0.17
1,3-DINITROTOLUENE	<0.17
1,2-DIMETHYLPHTHALATE	<0.17
4-CHLOROPHENYL PHENYL ETHER	<0.17

MCK0003604

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Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00725706

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003605

EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
FLUORANTHENE(b)	<0.17
FLUORANTHENE(k)	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	84
2-FLUOROBIPHENYL (%)	73
TERPHENYL (%)	91
PHENOL-D6 (%)	62
2-FLUOROPHENOL (%)	37
2,4,6-TRIBROMOPHENOL (%)	36

MCK0003606



GCMS - RESULTS

ATI I.D. : 00725706

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-41
SAMPLE MATRIX : SOIL
DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 08/09/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIPHTHYL PHTHALATE	<0.17

MCK0003607



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

T T : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00725705

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003608

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,b)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	113
2-FLUOROBIPHENYL (%)	100
TEREPHENYL	105
PHENOL-D8	114
1-FLUOROPHENOL (%)	71
2,4,6-TRIBROMOPHENOL (%)	55

MCK0003609

GCMS - RESULTS

ATI I.D. : 00725705

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/16/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/17/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/18/90
CLIENT I.D.	: MK-SB-27-31	DATE ANALYZED	: 08/09/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
ETHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
1-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
1-DINITROPHENOL	<0.85
1-TROPHENOL	<0.85
DIBENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003610



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00725704

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003611



I : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(c,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D6 (%)	104
2-FLUOROBIPHENYL (%)	88
TEREPHENYL (%)	98
PHENOL-D6 (%)	81
1-FLUOROPHENOL (%)	51
2,4,6-TRIBROMOPHENOL (%)	46

MCK0003612



GCMS - RESULTS

ATI I.D. : 00725704

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-27-21
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 08/09/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.17.

MCK0003613



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

1 : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00725703

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003614

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D8 (%)	69
2-FLUOROBIPHENYL (%)	80
TERPHENYL (%)	94
PHENOL-D8 (%)	86
2-FLUOROPHENOL (%)	59
2,4,6-TRIBROMOPHENOL (%)	51

MCK0003615

GCMS - RESULTS

ATI I.D. : 00725703

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SB-26-41
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/16/90
 DATE RECEIVED : 07/17/90
 DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
1,1,1-TRICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
1-CHLOROANILINE	<0.17
HEXACHLOROBTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
1-BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003616



Additional Compounds (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00725702

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003617



1 : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
FLUORO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	92
2-FLUOROBIPHENYL (%)	78
TERPHENYL (%)	100
PHENOL-D6 (%)	72
2-FLUOROPHENOL (%)	47
2,4,6-TRIBROMOPHENOL (%)	48

MCK0003618



GCMS - RESULTS

ATI I.D. : 00725702

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SB-26-26
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/16/90
DATE RECEIVED : 07/17/90
DATE EXTRACTED : 07/18/90
DATE ANALYZED : 08/09/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.17.

MCK0003619



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

T : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00725701

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003620



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	92
2-FLUOROBIPHENYL (%)	80
TERPHENYL (%)	94
PHENOL-D6 (%)	65
2-FLUOROPHENOL (%)	34
2,4,6-TRIBROMOPHENOL (%)	41

MCK0003621

GCMS - RESULTS

ATI I.D. : 00725701

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/16/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/17/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/18/90
CLIENT I.D.	: MK-SB-26-21	DATE ANALYZED	: 08/08/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
ITROSO-DI-N-PROPYLAMINE	<0.17
LACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
ITROPHENOL	<0.85
ENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003622



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 007257

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : REAGENT SOIL

DATE EXTRACTED : 07/18/90
 DATE ANALYZED : 07/31/90
 SAMPLE MATRIX : SOIL
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% SPIKED REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SAMPLE	% SPIKED REC.	
1,1-DICHLOROETHENE	<0.05	2.0	2.0	100	2.1	105	5
TRICHLOROETHENE	<0.05	2.8	3.1	113	3.1	113	0
CHLOROBENZENE	<0.05	2.5	2.9	116	3.0	120	3
TOLUENE	<0.1	2.5	2.8	112	2.8	112	0
BENZENE	<0.05	2.5	2.5	100	2.5	100	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003623



Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007257

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003624



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 007283

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPPINGS

DATE RECEIVED : 07/18/90

REPORT DATE : 08/13/90

PARAMETER	UNITS	09
CALCIUM	MG/L	91.3
COPPER	MG/L	0.09
IRON	MG/L	<0.01
HARDNESS	MG/L	213
POTASSIUM	MG/L	3.5
MAGNESIUM	MG/L	20.7
MANGANESE	MG/L	<0.01
SODIUM	MG/L	47.4
ZINC	MG/L	<0.01

MCK0003625



CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS

ATI I.D. : 007283

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CALCIUM	MG/L	00730400	171	165	4	**	**	**
COPPER	MG/L	00730400	<0.02	<0.02	0	0.89	1.0	89
IRON	MG/L	00730400	<0.01	<0.01	0	1.1	1.0	110
IRON	MG/KG	00728301	23400	23100	1	**	**	**
HARDNESS	MG/L	00730400	710	683	4	N/A	N/A	N/A
POTASSIUM	MG/L	00730400	3.5	3.3	6	13.6	10.0	101
POTASSIUM	MG/KG	00728301	3320	3380	0	**	**	**
MAGNESIUM	MG/L	00730400	68.7	65.9	4	**	**	**
MANGANESE	MG/L	00730400	0.03	<0.01	0	0.89	1.0	89
MANGANESE	MG/KG	00728301	522	502	4	610	98.8	99
SODIUM	MG/L	00730400	122	117	4	**	**	**
SODIUM	MG/KG	00728301	294	310	5	946	556	116
ZINC	MG/L	00730400	<0.01	<0.01	0	0.93	1.0	93
ZINC	MG/KG	00728301	54.5	58.9	4	110	49.4	108

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

-- Due to the necessary dilution of the sample, result was not attainable



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728301

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-01-05
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003627



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728302

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-DUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-01-1.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003628



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728303

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-02-0.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003629



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728304

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC. - TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-02-1.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003630



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728305

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-03-0.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003631



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728306

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-03-1.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003632



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728307

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-04-0.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003633



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728308

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-JUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-04-1.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003634



REAGENT BLANK

TEST: GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007283
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
UNITS : MG/KG
DILUTION FACTOR : N/A

COMPOUNDS

RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003635



QUALITY CONTROL DATA

ATI I.D. : 007283

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/29/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SAMPLE CONCENTRATION, SPIKED SAMPLE, SPIKED %, DUP. SAMPLE, DUP. %, RPD. Rows include ETHYLENE GLYCOL, DIETHYLENE GLYCOL, PROPYLENE GLYCOL, and HEXYLENE GLYCOL.

Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

QUALITY CONTROL DATA

TEST : GLYCOLS ATI I.D. : 007283
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/23/90
 PROJECT # : 17333,157.11 DATE ANALYZED : 07/29/90
 PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : 00728302 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED %	DUP. %		RPD
	RESULT	SPIKED		SAMPLE REC.	SAMPLE REC.	
ETHYLENE GLYCOL	<2.0	40.0	16	40	14	35
DIETHYLENE GLYCOL	<2.0	20.0	3.6	18	4.1	21
PROPYLENE GLYCOL	<2.0	20.0	13	65	13	65
HEXYLENE GLYCOL	<2.0	40.0	16	40	14	35

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003637



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00728309

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-TW-01-071890
SAMPLE MATRIX : WATER

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : N/A
DATE ANALYZED : 08/02/90
UNITS : MG/L
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003638



REAGENT BLANK

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 007283
PROJECT #	: 17333,157.11	DATE EXTRACTED	: 08/02/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE ANALYZED	: 08/02/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/L
		DILUTION FACTOR	: N/A

COMPOUNDS RESULTS

ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<2.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003639

QUALITY CONTROL DATA

ATI I.D. : 007283

TEST : GLYCOLS

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 REF I.D. : 00728309

 DATE EXTRACTED : 08/02/90
 DATE ANALYZED : 08/02/90
 SAMPLE MATRIX : WATER
 UNITS : MG/L

COMPOUNDS	SAMPLE CONC. RESULT	SPIKED SAMPLER	SPIKED % REC.	DUP.		RPD	
				SPIKED SAMPLE REC.	% REC.		
ETHYLENE GLYCOL	<2.0	20.0	20	100	19	95	5
DIETHYLENE GLYCOL	<2.0	10.0	9.9	99	9.6	96	3
PROPYLENE GLYCOL	<2.0	10.0	6.4	64	5.0	50	25
HEXYLENE GLYCOL	<2.0	20.0	20	100	19	95	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003640



ATI I.D. : 00728309

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-TW-01-071890
 SAMPLE MAIRIX : WATER

DATE SAMPLED : 07/18/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : N/A
 DATE ANALYZED : 07/31/90
 UNITS : UG/L
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
BUTANONE (MEK)	<20
1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	2
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	101
TOLUENE-D8 (%)	99
BENZENE-D6 (%)	106

MCK0003641



ANalytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728309

MATRIX : WATER

UNITS : UG/L

COMPOUNDS

RESULTS

FREON 113

5@

MCK0003642

@ - A standard was used to quantitate this value.

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/18/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/18/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: TRIP BLANK	DATE ANALYZED	: 07/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	50
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1-TRICHLOROETHANE	1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	104
B (%)	105
TOLUENE-D8 (%)	112

MCK0003643



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728310

MATRIX : WATER

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003644



REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007283
 DATE EXTRACTED : N/A
 DATE ANALYZED : 07/30/90
 UNITS : UG/L
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
NYL ACETATE	<10
OMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	TR<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	108
BFB (%)	101
TOLUENE-D8 (%)	113

- Compound detected at an unquantifiable trace level

MCK0003645



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007283

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003646

QUALITY CONTROL DATA

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) ATI I.D. : 007283
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : N/A
 PROJECT # : 17333,157.11 DATE ANALYZED : 08/01/90
 PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : WATER
 REF I.D. : REAGENT WATER UNITS : UG/L

COMPOUNDS	SAMPLE CONC. RESULT	SPIKED SPIKED	SAMPLER SAMPLE	DUP. %		RPD
				SAMPLE REC.	SAMPLE REC.	
1,1-DICHLOROETHENE	<1	40	34	85	32	6
TRICHLOROETHENE	<1	55	59	107	60	2
CHLOROBENZENE	<1	50	56	112	56	0
TOLUENE	<2	50	54	108	54	0
BENZENE	<1	50	45	90	46	2

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003647



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-01-05
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/23/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	96
TOLUENE-D8 (%)	93

MCK0003648



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728301

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003649

GCMS - RESULTS

ATI I.D. : 00728302

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/17/90
PROJECT #	: 17033,157.11	DATE RECEIVED	: 07/18/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/23/90
CLIENT I.D.	: MK-SS-01-1.0	DATE ANALYZED	: 07/31/90
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	82
TOLUENE-D8 (%)	86
BENZENE-D6 (%)	87

MCK0003650



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728302

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003651



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-02-0.5
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/31/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding concentration results.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Compound name and Percent recovery value.

MCK0003652



Analytical Technologies, **ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)**

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728303

MATRIX : SCIL

UNITS : MG/KG

COMPOUNDS

RESULTS

261 TRICHLOROFLUOROMETHANE

0.09

MCK0003653



ATI I.D. : 00728304

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-02-1.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/31/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding concentration results.

SURROGATE PERCENT RECOVERIES

Table with 2 columns: Surrogate compound name and Percent recovery value.

MCK0003654



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728304

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003655



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-03-0.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/23/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

MCK0003656

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
B (%)	96
TOLUENE-D8 (%)	92



Additional Compounds (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728305

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003657

GCMS - RESULTS

ATI I.D. : 00728306

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-03-1.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/18/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/23/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2 TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	1.0
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	96
B (%)	98
TOLUENE-D8 (%)	95

MCK0003658



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728306

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003659



TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-04-0.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/23/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	<0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
BROMODICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	1.9
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	83
B (%)	96
TOLUENE-D8 (%)	97

MCK0003660



Analytical **Technologies, Inc.** ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728307

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003661

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-04-1.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/17/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/23/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : 5

COMPOUNDS	RESULTS
CHLOROMETHANE	<2.5
BROMOMETHANE	<2.5
VINYL CHLORIDE	<0.25
CHLOROETHANE	<0.25
METHYLENE CHLORIDE	<1.5
ACETONE	<5.0
CARBON DISULFIDE	<0.25
1,1-DICHLOROETHENE	<0.25
1,1-DICHLOROETHANE	<0.25
1,2-DICHLOROETHENE (TOTAL)	<0.25
CHLOROFORM	<0.25
1,2-DICHLOROETHANE	<0.25
2-BUTANONE (MEK)	<5.0
1,1-TRICHLOROETHANE	<0.25
CARBON TETRACHLORIDE	<0.25
VINYL ACETATE	<2.5
BROMODICHLOROMETHANE	<0.25
1,1,2,2-TETRACHLOROETHANE	<0.25
1,2-DICHLOROPROPANE	<0.25
TRANS-1,3-DICHLOROPROPENE	<0.25
TRICHLOROETHENE	<0.25
DIBROMOCHLOROMETHANE	<0.25
1,1,2-TRICHLOROETHANE	<0.25
BENZENE	<0.25
CIS-1,3-DICHLOROPROPENE	<0.25
BROMOFORM	<1.5
2-HEXANONE (MEK)	<2.5
1-METHYL-2-PENTANONE (MIBK)	<2.5
TETRACHLOROETHENE	61
TOLUENE	<0.50
CHLOROBENZENE	<0.25
ETHYL BENZENE	<0.25
STYRENE	<0.25
TOTAL XYLENES	<0.25

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	**
FB (%)	**
TOLUENE-D8 (%)	**

MCK0003662

** Due to the necessary dilution of the sample, result was not attainable



Additional Compounds (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00728308

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003663



REAGENT BLANK

LIST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007283
 DATE EXTRACTED : 07/23/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.5
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
1,1-DICHLOROMETHANE	<0.05
1,1,2,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MBK)	<0.50
4-METHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	97
TOLUENE-D8 (%)	101

MCK0003664



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007283

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A



REAGENT BLANK

LIST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007283
 DATE EXTRACTED : 07/30/90
 DATE ANALYZED : 07/31/90
 UNITS : MG/KG
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<0.50
BROMOMETHANE	<0.50
VINYL CHLORIDE	<0.05
CHLOROETHANE	<0.05
METHYLENE CHLORIDE	0.3
ACETONE	<1.0
CARBON DISULFIDE	<0.05
1,1-DICHLOROETHENE	<0.05
1,1-DICHLOROETHANE	<0.05
1,2-DICHLOROETHENE (TOTAL)	<0.05
CHLOROFORM	<0.05
1,2-DICHLOROETHANE	<0.05
2-BUTANONE (MEK)	<1.0
1,1,1-TRICHLOROETHANE	<0.05
CARBON TETRACHLORIDE	<0.05
VINYL ACETATE	<0.50
1,1-DICHLOROMETHANE	<0.05
1,1,1,2-TETRACHLOROETHANE	<0.05
1,2-DICHLOROPROPANE	<0.05
TRANS-1,3-DICHLOROPROPENE	<0.05
TRICHLOROETHENE	<0.05
DIBROMOCHLOROMETHANE	<0.05
1,1,2-TRICHLOROETHANE	<0.05
BENZENE	<0.05
CIS-1,3-DICHLOROPROPENE	<0.05
BROMOFORM	<0.3
2-HEXANONE (MEK)	<0.50
1,1-DIMETHYL-2-PENTANONE (MIBK)	<0.50
TETRACHLOROETHENE	<0.05
TOLUENE	<0.10
CHLOROBENZENE	<0.05
ETHYL BENZENE	<0.05
STYRENE	<0.05
TOTAL XYLENES	<0.05

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	71
BFB (%)	84
TOLUENE-D8 (%)	87

MCK0003666



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007283

UNITS : MG/KG

COMPOUNDS

RESULTS

NONE DETECTED

N/A



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 007283

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : MCKESSON SANTA FE SPRINGS
REF I.D. : REAGENT SOIL

DATE EXTRACTED : 07/23/90
DATE ANALYZED : 07/31/90
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE REC., %, DUP. SPIKED SAMPLE REC., %, DUP. %, RPD. Rows include 1,1-DICHLOROETHENE, TRICHLOROETHENE, CHLOROBENZENE, TOLUENE, and BENZENE.

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample X 100

MCK0003668

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 07/18/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 07/18/90
PROJECT NAME	: MCKESSON SANTA FE SPRINGS	DATE EXTRACTED	: 07/19/90
CLIENT I.D.	: MK-TW-01-071890	DATE ANALYZED	: 08/05/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
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N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS (2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS (2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
NITROSO-DI-N-PROPYLAMINE	<10
1,1-DICHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS (2-CHLOROETHOXY) METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
3,4-DINITROPHENOL	<50
1-NITROPHENOL	<50
BENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003669



.ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHthalate	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL) PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
NZO(b) FLUORANTHENE	<10
_NZO(k) FLUORANTHENE	<10
BENZO(a) PYRENE	<10
INDENO(1,2,3-cd) PYRENE	<10
DIBENZO(a,h) ANTHRACENE	<10
BENZO(g,h,i) PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	58
1-FLUOROBIPHENYL (%)	82
TERPHENYL (%)	89
PHENOL-D6 (%)	40
2-FLUOROPHENOL (%)	51
2,4,6-TRIBROMOPHENOL (%)	58

MCK0003670



Analytical Technologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

BT : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00728309

MATRIX : WATER

UNITS : UG/L

COMPOUNDS

RESULTS

NONE DETECTED

N/A

MCK0003671



REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : REAGENT BLANK

ATI I.D. : 007283
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/03/90
 UNITS : UG/L
 DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL) ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL) ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
OPHORONE	<10
NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
4-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
1,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
6-DINITROTOLUENE	<10
ETHYL PHTHALATE	<10
4-CHLOROPHENYL PHENYL ETHER	<10

MCK0003672

(CONTINUED NEXT PAGE)



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
4-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	52
2-FLUOROBIPHENYL (%)	67
TRIPHENYL (%)	79
PHENOL-D6 (%)	45
1-FLUOROPHENOL (%)	48
2,4,6-TRIBROMOPHENOL (%)	57

MCK0003673



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007283

UNITS : UG/L

COMPOUNDS	RESULTS
420 ALIPHATIC HYDROCARBON C7	20
1602 ALIPHATIC HYDROCARBON C20	60



QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 007283

CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/19/90

PROJECT # : 17323,157.11 DATE ANALYZED : 08/04/90

PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : WATER

REF I.D. : REAGENT WATER UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<10	100	63	63	68	68	8
ACENAPHTHENE	<10	100	68	68	73	73	7
2,4-DINITROTOLUENE	<10	100	57	57	61	61	7
PYRENE	<10	100	93	93	98	98	5
N-NITROSO-DI-N-PROPYLAMINE	<10	100	42	42	43	43	2
1,4-DICHLOROBENZENE	<10	100	57	57	60	60	5
PENTACHLOROPHENOL	<50	400	384	96	333	83	14
PHENOL	<10	200	110	55	122	61	10
2-CHLOROPHENOL	<10	200	120	60	128	64	6
4-CHLORO-3-METHYLPHENOL	<10	200	154	77	76	38	67
4-NITROPHENOL	<50	400	578	144	494	124	15

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003675

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-01-05
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/17/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL)ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSO-DI-N-PROPYLAMINE	<0.17
1,1-DICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY)METHANE	<0.17
1,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
1-NAPHTHALENE	<0.17
2-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
1-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
1-BENZOFURAN	<0.17
1,4-DINITROTOLUENE	<0.17
1,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003676



MST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
2,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYL PHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYL PHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	100
1-FLUOROBIPHENYL (%)	92
BIPHENYL (%)	90
PHENOL-D6 (%)	105
2-FLUOROPHENOL (%)	83
2,4,6-TRIBROMOPHENOL (%)	80

MCK0003677



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00728301

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	RESULTS
PENTATRICONTANE	3
HEXATRICONTANE	4

MCK0003678



ATI I.D. : 00728302

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333.157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-01-1.0
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSC-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
1,3-DICHLOROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
1-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
1-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
4-NITROPHENOL	<0.85
1-BENZOFLURAN	<0.17
1,4-DINITROTOLUENE	<0.17
1,3-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003679

(CONTINUED NEXT PAGE)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-02-0.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/18/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 5

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.85
PHENOL	<0.85
ANILINE	<0.85
BIS (2-CHLOROETHYL) ETHER	<0.85
2-CHLOROPHENOL	<0.85
1,3-DICHLOROBENZENE	<0.85
1,4-DICHLOROBENZENE	<0.85
BENZYL ALCOHOL	<0.85
1,2-DICHLOROBENZENE	<0.85
2-METHYLPHENOL	<0.85
BIS (2-CHLOROISOPROPYL) ETHER	<0.85
4-METHYLPHENOL	<0.85
N-NITROSO-DI-N-PROPYLAMINE	<0.85
1,2-DICHLOROETHANE	<0.85
NITROBENZENE	<0.85
ISOPHORONE	<0.85
2-NITROPHENOL	<0.85
2,4-DIMETHYLPHENOL	<0.85
BENZOIC ACID	<4.25
BIS (2-CHLOROETHOXY) METHANE	<0.85
2,4-DICHLOROPHENOL	<0.85
1,2,4-TRICHLOROBENZENE	<0.85
1-NAPHTHALENE	<0.85
2-CHLOROANILINE	<0.85
HEXACHLOROBTADIENE	<0.85
4-CHLORO-3-METHYLPHENOL	<0.85
2-METHYLNAPHTHALENE	<0.85
HEXACHLOROCYCLOPENTADIENE	<0.85
1,4,6-TRICHLOROPHENOL	<0.85
2,4,5-TRICHLOROPHENOL	<4.25
2-CHLORONAPHTHALENE	<0.85
2-NITROANILINE	<4.25
DIMETHYL PHTHALATE	<0.85
ACENAPHTHYLENE	<0.85
3-NITROANILINE	<4.25
ACENAPHTHENE	<0.85
2,4-DINITROPHENOL	<4.25
1-NITROPHENOL	<4.25
1-BENZOFURAN	<0.85
2,4-DINITROTOLUENE	<0.85
2,6-DINITROTOLUENE	<0.85
DIETHYLPHTHALATE	<0.85

MCK0003680



ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.85
FLUORENE	<0.85
4-NITROANILINE	<4.25
4,6-DINITRO-2-METHYLPHENOL	<4.25
N-NITROSODIPHENYLAMINE	<0.85
4-BROMOPHENYL PHENYL ETHER	<0.85
HEXACHLORO BENZENE	<0.85
PENTACHLOROPHENOL	<4.25
PHENANTHRENE	<0.85
ANTHRACENE	<0.85
DI-BUTYL PHTHALATE	<0.85
FLUORANTHENE	<0.85
BENZIDINE	<8.5
PYRENE	<0.85
BUTYLBENZYL PHTHALATE	<0.85
3,3-DICHLOROBENZIDINE	<1.70
BENZO(a)ANTHRACENE	<0.85
BIS(2-ETHYLHEXYL) PHTHALATE	<0.85
CHRYSENE	<0.85
DI-N-OCTYL PHTHALATE	<0.85
BENZO(b)FLUORANTHENE	<0.85
BENZO(k)FLUORANTHENE	<0.85
BENZO(a)PYRENE	<0.85
INDENO(1,2,3-cd)PYRENE	<0.85
DIBENZO(a,h)ANTHRACENE	<0.85
BENZO(g,h,i)PERYLENE	<0.85

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	15*
2-FLUOROBIPHENYL (%)	36
TERPHEHYL (%)	51
PHENOL-D6 (%)	18*
2-FLUOROPHENOL (%)	29
2,4,6-TRIBROMOPHENOL (%)	77

* Result out of limits due to sample matrix interference



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00728303

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

TOTAL EXTRACTABLE
HYDROCARBONS C15-C35

300

MCK0003682

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT = : 17333,157.11
 PROJECT NAME : McKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-02-1.0
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/18/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
HEXACHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
4-DICHLOROPHENOL	<0.17
2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
3-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
1,4,6-TRICHLOROPHENOL	<0.17
1,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
NITROPHENOL	<0.85
1,2-BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003683



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-03-0.5
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSC-DI-N-PROPYLAMINE	<0.17
1,1-DICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
1-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
1-CHLORO-3-METHYLPHENOL	<0.17
2-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
1-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003684



ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSDIPHENYLAMINE	<0.17
3-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHthalate	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	1.9
CHRYSENE	<0.17
DI-N-OCTYLPHthalate	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	114
1-FLUOROBIPHENYL (%)	96
TERPHENYL (%)	96
PHENOL-D6 (%)	113
2-FLUOROPHENOL (%)	81
2,4,6-TRIBROMOPHENOL (%)	65

MCK0003685



ANalytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00728305

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

TOTAL EXTRACTABLE
HYDROCARBONS C15-C35

500

MCK0003686



ATI I.D. : 00728306

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON SANTA FE SPRINGS
CLIENT I.D. : MK-SS-03-1.0
SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/18/90
DATE RECEIVED : 07/18/90
DATE EXTRACTED : 07/19/90
DATE ANALYZED : 08/09/90
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Lists various chemical compounds and their corresponding results, mostly showing values less than 0.17.

MCK0003687

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

 CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-04-0.5
 SAMPLE MATRIX : SOIL

 DATE SAMPLED : 07/17/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
NITROSO-DI-N-PROPYLAMINE	<0.17
1,2-DICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
1-NAPHTHALENE	<0.17
4-CHLOROANILINE	<0.17
HEXACHLOROBUTADIENE	<0.17
4-CHLORO-3-METHYLPHENOL	<0.17
1-METHYLNAPHTHALENE	<0.17
HEXACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
1,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
1-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
2-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
1-BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003688



ST : EPA 8270 GC/MS FOR SEMIVOLATILE ORGANICS

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<0.17
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL PHENYL ETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-BUTYL PHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL) PHTHALATE	1.9
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROBENZENE-D6 (%)	65
1,4-DIFLUOROBIPHENYL (%)	50
1,4-DIBROMOBIPHENYL (%)	56
1,2-DICHLOROBENZENE-D6 (%)	64
2,4-DIFLUOROPHENOL (%)	53
1,2,4,6-TETRABROMOPHENOL (%)	42

MCK0003689



Analytical **Technologies**, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00728307

MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS

RESULTS

TOTAL EXTRACTABLE
HYDROCARBONS C15-C35

400

MCK0003690



TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
 PROJECT # : 17333,157.11
 PROJECT NAME : MCKESSON SANTA FE SPRINGS
 CLIENT I.D. : MK-SS-04-1.0
 SAMPLE MATRIX : SOIL

DATE SAMPLED : 07/17/90
 DATE RECEIVED : 07/18/90
 DATE EXTRACTED : 07/19/90
 DATE ANALYZED : 08/09/90
 UNITS : MG/KG
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSDIMETHYLAMINE	<0.17
PHENOL	<0.17
ANILINE	<0.17
BIS(2-CHLOROETHYL) ETHER	<0.17
2-CHLOROPHENOL	<0.17
1,3-DICHLOROBENZENE	<0.17
1,4-DICHLOROBENZENE	<0.17
BENZYL ALCOHOL	<0.17
1,2-DICHLOROBENZENE	<0.17
2-METHYLPHENOL	<0.17
BIS(2-CHLOROISOPROPYL) ETHER	<0.17
4-METHYLPHENOL	<0.17
N-NITROSDI-N-PROPYLAMINE	<0.17
1,1-DICHLOROETHANE	<0.17
NITROBENZENE	<0.17
ISOPHORONE	<0.17
2-NITROPHENOL	<0.17
2,4-DIMETHYLPHENOL	<0.17
BENZOIC ACID	<0.85
BIS(2-CHLOROETHOXY) METHANE	<0.17
2,4-DICHLOROPHENOL	<0.17
1,2,4-TRICHLOROBENZENE	<0.17
NAPHTHALENE	<0.17
1-CHLOROANILINE	<0.17
1,2-DICHLOROBUTADIENE	<0.17
2-CHLORO-1-METHYLPHENOL	<0.17
1-METHYLNAPHTHALENE	<0.17
1,2,3,4,5-PENTACHLOROCYCLOPENTADIENE	<0.17
2,4,6-TRICHLOROPHENOL	<0.17
2,4,5-TRICHLOROPHENOL	<0.85
2-CHLORONAPHTHALENE	<0.17
2-NITROANILINE	<0.85
DIMETHYL PHTHALATE	<0.17
ACENAPHTHYLENE	<0.17
3-NITROANILINE	<0.85
ACENAPHTHENE	<0.17
2,4-DINITROPHENOL	<0.85
1-NITROPHENOL	<0.85
BENZOFURAN	<0.17
2,4-DINITROTOLUENE	<0.17
2,6-DINITROTOLUENE	<0.17
DIETHYLPHTHALATE	<0.17

MCK0003691



REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8070 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 007283

UNITS : MG/KG

COMPOUNDS

RESULTS

415 ALIPHATIC HYDROCARBON C7

1

432 ALIPHATIC HYDROCARBON C7

0.2

MCK0003692

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS) ATI I.D. : 007283
 CLIENT : HARDING LAWSON ASSOC.-TUSTIN DATE EXTRACTED : 07/19/90
 PROJECT # : 17223,157.11 DATE ANALYZED : 08/09/90
 PROJECT NAME : MCKESSON SANTA FE SPRINGS SAMPLE MATRIX : SOIL
 REF I.D. : 00728303 UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROENZENE	<0.17	3.3	2.8	85	2.6	79	7
ACENAPHTHENE	<0.17	3.3	3.3	100	3.0	91	10
2,4-DINITROTOLUENE	<0.17	3.3	2.1	64	1.7	52	21
PYRENE	<0.17	3.3	3.1	109	3.1	97	15
N-NITROSO-DI-N-PROPYLAMINE	<0.17	3.3	2.7	82	2.3	70	16
1,4-DICHLOROBENZENE	<0.17	3.3	2.6	79	2.3	70	12
PENTACHLOROPHENOL	<0.65	13.3	13.6	45	12.9	97	5
PHENOL	<0.17	6.7	5.5	82	4.8	72	14
2-CHLOROPHENOL	<0.17	6.7	5.6	84	5.0	75	11
4-CHLORO-3-METHYLPHENOL	<0.17	6.7	5.2	78	4.9	73	6
4-NITROPHENOL	<0.65	13.3	13.2	99	11.8	89	11

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003693



Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 101271

February 21, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: MCKESSON-SANTA FE SPRINGS
Project # : 17333,163.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
January 24, 1991	13	SOIL

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable action limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.


TIM J. FITZPATRICK
SENIOR PROJECT MANAGER


For: RICHARD M. AMANO
LABORATORY MANAGER

MCK0003696

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

Report Date: February 21, 1991
 ATI I.D. : 101271

ATI #	Client Description	Matrix	Date Collected
1	MK-SB-36 15.0-15.5	SOIL	23-JAN-91
2	MK-SB-36 24.5-25.0	SOIL	23-JAN-91
3	MK-SB-36 39.5-40.0	SOIL	23-JAN-91
4	MK-SB-36 45.0-45.5	SOIL	23-JAN-91
5	MK-SB-35 1.5-2.0	SOIL	23-JAN-91
6	MK-SB-35 10.0-10.5	SOIL	23-JAN-91
7	MK-SB-35 14.5-15.0	SOIL	23-JAN-91
8	MK-SB-34 5.0-5.5	SOIL	23-JAN-91
9	MK-SB-34 10.0-10.5	SOIL	23-JAN-91
10	MK-SB-34 15.0-15.5	SOIL	23-JAN-91
11	MK-SB-33 1.5-2.0	SOIL	23-JAN-91
12	MK-SB-33 10.0-10.5	SOIL	23-JAN-91
13	MK-SB-33 15.0-15.5	SOIL	23-JAN-91

---TOTALS---

<u>Matrix</u>	<u># Samples</u>
SOIL	13

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003697



ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D.: 101271

Analysis	Technique/Description
EPA 325.2 (CHLORIDE)	COLORIMETRIC
EPA 340.2 (FLUORIDE)	ELECTRODE
EPA 353.1 (NITRATE AS NITROGEN)	COLORIMETRIC
EPA 6010 (IRON)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MANGANESE)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (POTASSIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (SODIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (ZINC)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
EPA 9036 (SULFATE)	COLORIMETRIC
EPA 9045 (pH)	ELECTRODE

MCK0003698



GENERAL CHEMISTRY RESULTS

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D.: 10127

Sample #	Client ID	Matrix	Date Sampled	Date Received
5	MK-SB-35 1.5-2.0	SOIL	23-JAN-91	24-JAN-9
6	MK-SB-35 10.0-10.5	SOIL	23-JAN-91	24-JAN-9
7	MK-SB-35 14.5-15.0	SOIL	23-JAN-91	24-JAN-9
8	MK-SB-34 5.0-5.5	SOIL	23-JAN-91	24-JAN-9
9	MK-SB-34 10.0-10.5	SOIL	23-JAN-91	24-JAN-9

Parameter	Units	5	6	7	8	9
CHLORIDE	MG/KG	891	58	33	110	322
FLUORIDE	MG/KG	6.0	7.1	<5	11.3	9.3
NITRATE AS NITROGEN	MG/KG	16	14	9.0	2.8	3.5
PH	UNITS	8.2	8.0	7.9	4.3	7.6
SULFATE	MG/KG	6400	174	119	9270	741



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D.: 10127

Sample Client ID #	Matrix	Date Sampled	Date Received
10 MK-SB-34 15.0-15.5	SOIL	23-JAN-91	24-JAN-91
11 MK-SB-33 1.5-2.0	SOIL	23-JAN-91	24-JAN-91
12 MK-SB-33 10.0-10.5	SOIL	23-JAN-91	24-JAN-91
13 MK-SB-33 15.0-15.5	SOIL	23-JAN-91	24-JAN-91

Parameter	Units	10	11	12	13
CHLORIDE	MG/KG	1170	540	79.3	30
FLUORIDE	MG/KG	<5	122	10	<5
NITRATE AS NITROGEN	MG/KG	18	32	8.6	6.0
pH	UNITS	7.2	10	7.7	7.9
SULFATE	MG/KG	179	1730	254	<100

MCK0003700



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D. : 10127

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
pH	101271-07	UNITS	7.9	7.8	1	N/A	N/A	N/A
NITRATE AS NITROGEN	101266-09	MG/KG	47.5	47.1	1	52.4	4.6	111
FLUORIDE	101215-02	MG/KG	<5.0	<5.0	0	51	50	102
CHLORIDE	101271-12	MG/KG	79.3	81.7	3	187	93.7	114
NITRATE AS NITROGEN	101289-24	MG/KG	824	662	22*	N/A**	N/A**	N/A**
FLUORIDE	101271-09	MG/KG	9.3	9.3	<1	51	50	83
SULFATE	101271-05	MG/KG	6400	6960	8	8780	3330	63*

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
 RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

- * RESULT OUTSIDE OF LIMITS DUE TO SAMPLE MATRIX INTERFERENCE.
- ** DUE TO THE NECESSARY DILUTION OF THE SAMPLE, RESULT WAS NOT ATTAINABLE.

MCK0003701

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D. : 10127

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
NITRATE AS NITROGEN	10144	MG/KG	<0.05	2.04	2.0	102
CHLORIDE	10188	MG/KG	<20	1000	1000	100
FLUORIDE	10237	MG/KG	<0.5	4.9	5.0	98
SULFATE	10256	MG/KG	<100	21.8	20.0	109

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003702

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Client : HARDING LAWSON

ATI I.D. : 101271

Project # : 17333,163.11

Project Name: MCKESSON-SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
1	MK-SB-36 15.0-15.5	SOIL	25-JAN-91	23-JAN-91	01-FEB-91	1.00
2	MK-SB-36 24.5-25.0	SOIL	25-JAN-91	23-JAN-91	01-FEB-91	1.00
3	MK-SB-36 39.5-40.0	SOIL	25-JAN-91	23-JAN-91	01-FEB-91	1.00

Parameter	Units	1	2	3
ACETONE	MG/KG	<1	<1	<1
BENZENE	MG/KG	<0.05	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	<1	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05	<0.05
CHLOROBENZENE	MG/KG	<0.05	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05	2	0.07
1,1-DICHLOROETHENE	MG/KG	<0.05	<0.05	0.32
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3	<0.3	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	<0.05	12	0.87
TOLUENE	MG/KG	<0.1	<0.1	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05	33	1.4
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TRICHLOROETHENE	MG/KG	<0.05	2	0.1
VINYL ACETATE	MG/KG	<0.5	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	<0.05	<0.05	<0.05
BFB	†	93	94	86
1,2-DICHLOROETHANE-D4	†	79	89	85
TOLUENE	†	83	89	83

MCK0003703



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: SOIL

ATI I.D.: 101271

Sample Parameters	Units	Results
1 NONE DETECTED		N/A
2 NONE DETECTED		N/A
3 NONE DETECTED		N/A

MCK0003704



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D. : 101271

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
4	MK-SB-36 45.0-45.5	SOIL	25-JAN-91	23-JAN-91	01-FEB-91	1.00

Parameter	Units	4
ACETONE	MG/KG	<1
BENZENE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
BROMOMETHANE	MG/KG	<0.5
2-BUTANONE (MEK)	MG/KG	<1
CARBON DISULFIDE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
CHLORO BENZENE	MG/KG	<0.05
CHLOROETHANE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
CHLOROMETHANE	MG/KG	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	0.09
1,1-DICHLOROETHENE	MG/KG	0.35
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
STYRENE	MG/KG	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	1.4
TOLUENE	MG/KG	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	0.2
VINYL ACETATE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
BFB	%	85
1,2-DICHLOROETHANE-D4	%	80
TOLUENE	%	78

MCK0003705



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: SOIL

ATI I.D.: 101271

Sample Parameters	Units	Results
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4 NONE DETECTED		N/A
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MCK0003706



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240
 Blank I.D. : 10199
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D. : 101271
 Date Extracted: 25-JAN-91
 Date Analyzed : 25-JAN-91
 Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	MG/KG	<1
BENZENE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
BROMOMETHANE	MG/KG	<0.5
2-BUTANONE (MEK)	MG/KG	<1
CARBON DISULFIDE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
CHLOROBENZENE	MG/KG	<0.05
CHLOROETHANE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
CHLOROMETHANE	MG/KG	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
STYRENE	MG/KG	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	<0.05
TOLUENE	MG/KG	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
BFB	‡	85
1,2-DICHLOROETHANE-D4	‡	89
TOLUENE	‡	93

MCK0003707



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

**REAGENT BLANK
(ADDITIONAL COMPOUNDS)**

Test : EPA 8240
Blank I.D. : 10199
Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D. : 101271
Date Extracted: 25-JAN-91
Date Analyzed : 25-JAN-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0003708



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240
 MSMSD # : 10247
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D. : 101271
 Date Extracted: 25-JAN-91
 Date Analyzed : 01-FEB-91
 Sample Matrix : SOIL
 REF I.D. : 101271-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	MG/KG	<0.05	2.8	2.3	84	2.3	84	0
CHLOROBENZENE	MG/KG	<0.05	2.8	2.8	100	2.6	94	6
1,1-DICHLOROETHENE	MG/KG	<0.05	2.4	2.3	95	2.1	89	6
TOLUENE	MG/KG	<0.1	2.8	2.7	98	2.7	98	0
TRICHLOROETHENE	MG/KG	<0.05	2.5	2.1	85	2.0	80	6

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003709



Green Associates
 15401 Wilshire Avenue, Suite 100
 Tustin, California 92680
 714/259-7992 - 213/617-7232
 Telecopy: 714/259-1378

Job Number: 17333, 163, 11
 Name/Location: Mc Kesson Santa Fe Spring
 Project Manager: Burton Chadwick Recorder: *Burton Chadwick*
 Samplers: Dan Johnson

CHAIN OF CUSTODY FORM

Lab: **ATI**
 Page 1 of 2

ANALYSIS REQUESTED	DATE	TIME
EPA 601/8010		
EPA 602/8020		
EPA 624/8240		
EPA 625/8270		
ICP METALS		
EPA 8015M/TPH		
PH - IETS Method		
S.I. Tox 330/gc/c		
CLSD F NO3 NAK		
Fe, Mn, Zn		

STATION DESCRIPTION/NOTES	DATE	TIME
MK-SB-36 15:0-15.5	11/01/23	PM
MK-SB-36 24.5-25		PM
MK-SB-36 39.5-40		PM
MK-SB-36 45.5-45.5		PM
MK-SB-35 1.5-2.0		AM
MK-SB-35 10.0-10.5		
MK-SB-35 14.5-15		
MK-SB-34 1.5-5.5		
MK-SB-34 10.0-10.5		
MK-SB-34 15.0-15.5		

SOURCE CODE	MATRIX	CONTAINERS & PRESERV.		SAMPLE NUMBER OR LAB NUMBER			DATE			
		Water	Sediment	Oil	Yr	Wk	Seq	Yr	Mo	Dy
50					11	01	23			

LAB NUMBER	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD	
					RECEIVED BY: (Signature)	DATE/TIME
MCK0003710					RECEIVED BY: (Signature)	DATE/TIME
					RECEIVED BY: (Signature)	DATE/TIME
					RECEIVED BY: (Signature)	DATE/TIME
					RECEIVED BY: (Signature)	DATE/TIME
					DISPATCHED BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT						

Received by: *Bob DeBay* 11/24/23
 Received by: *Bob DeBay*
 Received by: *Bob DeBay*
 Received by: *Bob DeBay*
 Dispatched by: *Maura Van Derhey* 11/24/23
 Method of Shipment: *C.O.P*



Analytical Technologies, Inc.

Corporate Offices 5550 Morehouse Drive San Diego CA 92121 (619) 458-9141

AMENDED

ATI I.D.: 101271

March 13, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: MCKESSON-SANTA FE SPRINGS
Project # : 17333,163.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
January 24, 1991	13	SOIL

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

losed are the metals results and the quality control data.


TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER


RICHARD M. AMANO
LABORATORY MANAGER

MCK0003712

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

Report Date: March 13, 1991
 ATI I.D. : 101271

ATI #	Client Description	Matrix	Date Collected
1	MK-SB-36 15.0-15.5	SOIL	23-JAN-91
2	MK-SB-36 24.5-25.0	SOIL	23-JAN-91
3	MK-SB-36 39.5-40.0	SOIL	23-JAN-91
4	MK-SB-36 45.0-45.5	SOIL	23-JAN-91
5	MK-SB-35 1.5-2.0	SOIL	23-JAN-91
6	MK-SB-35 10.0-10.5	SOIL	23-JAN-91
7	MK-SB-35 14.5-15.0	SOIL	23-JAN-91
8	MK-SB-34 5.0-5.5	SOIL	23-JAN-91
9	MK-SB-34 10.0-10.5	SOIL	23-JAN-91
10	MK-SB-34 15.0-15.5	SOIL	23-JAN-91
11	MK-SB-33 1.5-2.0	SOIL	23-JAN-91
12	MK-SB-33 10.0-10.5	SOIL	23-JAN-91
13	MK-SB-33 15.0-15.5	SOIL	23-JAN-91

---TOTALS---

Matrix
Samples

SOIL

13

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003713



Analytical Technologies, Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D.: 101271

Analysis	Technique/Description
EPA 340.2 (FLUORIDE)	ELECTRODE
EPA 353.1 (NITRATE AS NITROGEN)	COLORIMETRIC
EPA 6010 (IRON)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MANGANESE)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (POTASSIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (SODIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (ZINC)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
EPA 9038 (SULFATE)	TURBIDIMETRIC
EPA 9045 (pH)	ELECTRODE
EPA 9251 (CHLORIDE)	COLORIMETRIC

MCK0003714



Analytical Technologies, Inc.

METALS RESULTS

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D.: 101271

Sample #	Client ID	Matrix	Date Sampled	Date Received
5	MK-SB-35 1.5-2.0	SOIL	23-JAN-91	24-JAN-91
6	MK-SB-35 10.0-10.5	SOIL	23-JAN-91	24-JAN-91
7	MK-SB-35 14.5-15.0	SOIL	23-JAN-91	24-JAN-91
8	MK-SB-34 5.0-5.5	SOIL	23-JAN-91	24-JAN-91
9	MK-SB-34 10.0-10.5	SOIL	23-JAN-91	24-JAN-91

Parameter	Units	5	6	7	8	9
IRON	MG/KG	23100	23200	10500	23200	20000
POTASSIUM	MG/KG	3990	3620	1360	3980	3190
MANGANESE	MG/KG	398	875	157	250	738
SODIUM	MG/KG	3640	365	181	631	516
ZINC	MG/KG	61.2	54.2	170	170	48.8

MCK0003715



METALS RESULTS

Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D.: 101271

Sample #	Client ID	Matrix	Date Sampled	Date Received
10	MK-SB-34 15.0-15.5	SOIL	23-JAN-91	24-JAN-91
11	MK-SB-33 1.5-2.0	SOIL	23-JAN-91	24-JAN-91
12	MK-SB-33 10.0-10.5	SOIL	23-JAN-91	24-JAN-91
13	MK-SB-33 15.0-15.5	SOIL	23-JAN-91	24-JAN-91

Parameter	Units	10	11	12	13
IRON	MG/KG	25000	17800	22800	8770
POTASSIUM	MG/KG	4580	8380	3680	1240
MANGANESE	MG/KG	743	360	940	143
SODIUM	MG/KG	380	4730	268	162
ZINC	MG/KG	60.3	59.4	56.6	25.7

MCK0003716

METALS - QUALITY CONTROL

DUP/MS

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON-SANTA FE SPRINGS

ATI I.D. : 101271

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	‡ Rec
IRON	101279-14	MG/KG	10700	11300	5	**	**	**
MANGANESE	101279-14	MG/KG	276	253	9	**	**	**
POTASSIUM	101279-14	MG/KG	2150	2260	5	217	2400	115
SODIUM	101279-14	MG/KG	135	142	5	542	653	96
ZINC	101279-14	MG/KG	30.0	32.6	8	71.2	43.4	95

‡ Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003717



Analytical **Technologies, Inc.**

Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 101280

January 14, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: MCKESSON SANTA FE SPRINGS

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
January 25, 1991	21	SOIL

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.


J. FITZPATRICK
FOR PROJECT MANAGER


RICHARD M. AMANO
LABORATORY MANAGER

MCK0003718



SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON SANTA FE SPRINGS

Report Date: February 14, 1991
 ATI I.D. : 101280

ATI #	Client Description	Matrix	Date Collected
1	MK-SB-37 1.0-1.5	SOIL	25-JAN-91
2	MK-SB-37 5.0-5.5	SOIL	25-JAN-91
3	MK-SB-37 9.5-10.0	SOIL	25-JAN-91
4	MK-SB-37 14.5-15.0	SOIL	25-JAN-91
5	MK-SB-37 19.5-20.0	SOIL	25-JAN-91
6	MK-SB-37 24.0-24.5	SOIL	25-JAN-91
7	MK-SB-38 5.0-5.5	SOIL	25-JAN-91
8	MK-SB-38 15.0-15.5	SOIL	25-JAN-91
9	MK-SB-38 19.5-20.0	SOIL	25-JAN-91
10	MK-SB-38 24.5-25.0	SOIL	25-JAN-91
11	MK-SB-38 29.5-30.0	SOIL	25-JAN-91
12	MK-SB-38 34.5-35.0	SOIL	25-JAN-91
13	MK-SB-38 40.0-40.5	SOIL	25-JAN-91
14	MK-SB-38 44.0-44.5	SOIL	25-JAN-91
15	MK-SB-39 9.5-10.0	SOIL	25-JAN-91
16	MK-SB-40 5.0-5.5	SOIL	25-JAN-91
17	MK-SB-40 9.5-10.0	SOIL	25-JAN-91
18	MK-SB-41 9.5-10.0	SOIL	25-JAN-91
19	MK-SB-41 4.5-5.0	SOIL	25-JAN-91
--	MK-SB-42 9.5-10.0	SOIL	25-JAN-91
--	MK-SB-42 5.0-5.5	SOIL	25-JAN-91

---TOTALS---

<u>Matrix</u>	<u># Samples</u>
SOIL	21

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003719



Analytical Technologies, Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D.: 101280

Analysis

Technique/Description

EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

GC/MASS SPECTROMETER

MCK0003720

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

 : 8240
 Client : HARDING LAWSON
 Project #: 17333,163.11

 ATI I.D. : 101280
 Project Name: MCKESSON SANTA FE
 SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
1	MK-SB-37 1.0-1.5	SOIL	26-JAN-91	25-JAN-91	01-FEB-91	1.00
2	MK-SB-37 5.0-5.5	SOIL	26-JAN-91	25-JAN-91	01-FEB-91	1.00
3	MK-SB-37 9.5-10.0	SOIL	26-JAN-91	25-JAN-91	01-FEB-91	1.00

Parameter	Units	1	2	3
ACETONE	MG/KG	<1	<1	<1
BENZENE	MG/KG	<0.05	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	<1	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05	<0.05
CHLOROBENZENE	MG/KG	<0.05	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
-DICHLOROETHANE	MG/KG	0.2	0.63	0.1
-DICHLOROETHANE	MG/KG	0.2	0.2	0.2
1,1-DICHLOROETHENE	MG/KG	0.58	<0.05	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05	0.1	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	11	6.3	4.9
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	1.5	5.0	0.3
TOLUENE	MG/KG	<0.1	<0.1	0.1
1,1,1-TRICHLOROETHANE	MG/KG	1.6	0.3	0.5
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TRICHLOROETHENE	MG/KG	0.4	<0.05	0.1
VINYL ACETATE	MG/KG	<0.5	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	<0.05	0.09	<0.05
BFB	§	90	90	94
1,2-DICHLOROETHANE-D4	§	82	91	94
TOLUENE-d8	§	88	88	90

MCK0003721



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: 8240

Matrix: SOIL

ATI I.D.: 101280

Sample Parameters	Units	Results
1 NONE DETECTED		N/A
2 NONE DETECTED		N/A
3 NONE DETECTED		N/A

MCK0003722



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

t : 8240
 Client : HARDING LAWSON
 Project #: 17333,163.11

ATI I.D. : 101280
 Project Name: McKESSON SANTA FE
 SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
4	MK-SB-37 14.5-15.0	SOIL	26-JAN-91	25-JAN-91	01-FEB-91	1.00
5	MK-SB-37 19.5-20.0	SOIL	26-JAN-91	25-JAN-91	02-FEB-91	1.00
6	MK-SB-37 24.0-24.5	SOIL	26-JAN-91	25-JAN-91	02-FEB-91	1.00

Parameter	Units	4	5	6
ACETONE	MG/KG	<1	<1	<1
BENZENE	MG/KG	0.07	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	<1	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05	<0.05
CHLOROBENZENE	MG/KG	<0.05	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
-DICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
-DICHLOROETHANE	MG/KG	0.2	0.1	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	2.6	1.8	0.66
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	0.1	<0.05	<0.05
TOLUENE	MG/KG	<0.1	<0.1	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05	0.1	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TRICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
VINYL ACETATE	MG/KG	<0.5	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	<0.05	<0.05	<0.05
BFB	‡	90	99	99
1,2-DICHLOROETHANE-D4	‡	91	93	97
TOLUENE-d8	‡	88	97	102

MCK0003723



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: 8240

Matrix: SOIL

ATI I.D.: 101280

Sample Parameters	Units	Results
4 NONE DETECTED		N/A
5 ALIPHATIC HYDROCARBON 302	MG/KG	3
6 NONE DETECTED		N/A

MCK0003724



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Lot : 8240
 Client : HARDING LAWSON
 Project #: 17333,163.11

ATI I.D. : 101280
 Project Name: MCKESSON SANTA FE
 SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
7	MK-SB-38 5.0-5.5	SOIL	26-JAN-91	25-JAN-91	02-FEB-91	1.00
8	MK-SB-38 15.0-15.5	SOIL	26-JAN-91	25-JAN-91	02-FEB-91	1.00
9	MK-SB-38 19.5-20.0	SOIL	26-JAN-91	25-JAN-91	05-FEB-91	1.00

Parameter	Units	7	8	9
ACETONE	MG/KG	<1	<1	<1
BENZENE	MG/KG	<0.05	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	<1	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05	<0.05
CHLORO BENZENE	MG/KG	<0.05	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
1,1-DICHLOROETHANE	MG/KG	0.2	<0.05	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05	0.06	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	0.55	1.8	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	0.93	2.1	<0.05
TOLUENE	MG/KG	<0.1	<0.1	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	0.4	0.3	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TRICHLOROETHENE	MG/KG	0.1	0.1	<0.05
VINYL ACETATE	MG/KG	<0.5	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	<0.05	<0.05	<0.05
BFB	%	92	92	89
1,2-DICHLOROETHANE-D4	%	84	86	84
TOLUENE-d8	%	92	94	92



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: 8240

Matrix: SOIL

ATI I.D.: 101280

Sample Parameters	Units	Results
7 ALIPHATIC HYDROCARBON 275	MG/KG	0.5
8 ALIPHATIC HYDROCARBON 247	MG/KG	0.3
ALIPHATIC HYDROCARBON 564	MG/KG	0.3
ALIPHATIC HYDROCARBON 564	MG/KG	0.3
ALIPHATIC HYDROCARBON 648	MG/KG	0.7
ALIPHATIC HYDROCARBON 749	MG/KG	0.4
9 317 METHYL ACETATE	MG/KG	0.4

MCK0003726



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: 8240

Matrix: SOIL

ATI I.D.: 101280

Sample Parameters	Units	Results
10 316 METHYL ACETATE	MG/KG	0.3
11 NONE DETECTED		N/A
12 NONE DETECTED		N/A



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : 8240
 Client : HARDING LAWSON
 Project #: 17333,163.11

ATI I.D. : 101280
 Project Name: MCKESSON SANTA FE
 SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
13	MK-SB-38 40.0-40.5	SOIL	26-JAN-91	25-JAN-91	01-FEB-91	1.00
14	MK-SB-38 44.0-44.5	SOIL	26-JAN-91	25-JAN-91	01-FEB-91	1.00
15	MK-SB-39 9.5-10.0	SOIL	26-JAN-91	25-JAN-91	05-FEB-91	1.00

Parameter	Units	13	14	15
ACETONE	MG/KG	<1	<1	<1
BENZENE	MG/KG	<0.05	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	<1	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05	<0.05
CHLORO BENZENE	MG/KG	<0.05	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
1,1-DICHLOROETHANE	MG/KG	0.2	0.4	<0.05
1,2-DICHLOROETHANE	MG/KG	0.08	<0.05	0.1
1,1-DICHLOROETHENE	MG/KG	0.82	<0.05	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	0.4	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	5.4	4.3	2.0
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	1.7	0.80	0.1
TOLUENE	MG/KG	<0.1	<0.1	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	2.2	0.70	0.2
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TRICHLOROETHENE	MG/KG	0.4	0.2	<0.05
VINYL ACETATE	MG/KG	<0.5	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	0.06	<0.05	<0.05
BFB	§	89	94	88
1,2-DICHLOROETHANE-D4	§	81	89	73
TOLUENE-d8	§	88	93	86

MCK0003729



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: 8240

Matrix: SOIL

ATI I.D.: 101280

Sample Parameters	Units	Results
13 NONE DETECTED		N/A
14 NONE DETECTED		N/A
15 NONE DETECTED		N/A

MCK0003730

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

 c : 8240
 Client : HARDING LAWSON
 Project #: 17333,163.11

 ATI I.D. : 101280
 Project Name: McKESSON SANTA FE
 SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
16	MK-SB-40 5.0-5.5	SOIL	28-JAN-91	25-JAN-91	06-FEB-91	1.00
17	MK-SB-40 9.5-10.0	SOIL	28-JAN-91	25-JAN-91	01-FEB-91	1.00
18	MK-SB-41 9.5-10.0	SOIL	28-JAN-91	25-JAN-91	01-FEB-91	1.00

Parameter	Units	16	17	18
ACETONE	MG/KG	27	<1	<1
BENZENE	MG/KG	<0.05	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	4.5	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05	<0.05
CHLOROBENZENE	MG/KG	<0.05	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05	<0.05	<0.05
-DICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
-DICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3	<0.3	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
TOLUENE	MG/KG	<0.1	<0.1	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05	<0.05
TRICHLOROETHENE	MG/KG	<0.05	<0.05	<0.05
VINYL ACETATE	MG/KG	<0.5	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	<0.05	<0.05	<0.05
BFB	§	84	91	94
1,2-DICHLOROETHANE-D4	§	75	94	90
TOLUENE-d8	§	84	90	91



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: 8240

Matrix: SOIL

ATI I.D.: 101280

Sample Parameters	Units	Results
16 NONE DETECTED		N/A
17 NONE DETECTED		N/A
18 NONE DETECTED		N/A

MCK0003732



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Client : 8240
 Client : HARDING LAWSON
 Project #: 17333,163.11

ATI I.D. : 101280
 Project Name: McKESSON SANTA FE
 SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
19	MK-SB-41 4.5-5.0	SOIL	28-JAN-91	25-JAN-91	01-FEB-91	1.00
20	MK-SB-42 9.5-10.0	SOIL	28-JAN-91	25-JAN-91	05-FEB-91	5.00
21	MK-SB-42 5.0-5.5	SOIL	28-JAN-91	25-JAN-91	05-FEB-91	5.00

Parameter	Units	19	20	21
ACETONE	MG/KG	<1	49	95
BENZENE	MG/KG	<0.05	<0.25	<0.25
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.25	<0.25
BROMOFORM	MG/KG	<0.3	<1.5	<1.5
BROMOMETHANE	MG/KG	<0.5	<2.5	<2.5
2-BUTANONE (MEK)	MG/KG	<1	6.0	13
CARBON DISULFIDE	MG/KG	<0.05	<0.25	<0.25
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.25	<0.25
CHLORO BENZENE	MG/KG	<0.05	<0.25	<0.25
CHLOROETHANE	MG/KG	<0.05	<0.25	<0.25
CHLOROFORM	MG/KG	<0.05	<0.25	<0.25
CHLOROMETHANE	MG/KG	<0.5	<2.5	<2.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05	<0.25	<0.25
1,1-DICHLOROETHANE	MG/KG	<0.05	<0.25	<0.25
1,2-DICHLOROETHANE	MG/KG	<0.05	<0.25	<0.25
1,1-DICHLOROETHENE	MG/KG	<0.05	<0.25	<0.25
CIS-1,2-DICHLOROETHENE	MG/KG	0.13	<0.25	<0.25
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.25	<0.25
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.25	<0.25
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.25	<0.25
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.25	<0.25
ETHYLBENZENE	MG/KG	<0.05	<0.25	<0.25
2-HEXANONE (MBK)	MG/KG	<0.5	<2.5	<2.5
METHYLENE CHLORIDE	MG/KG	<0.3	<1.5	<1.5
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<2.5	<2.5
STYRENE	MG/KG	<0.05	<0.25	<0.25
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.25	<0.25
TETRACHLOROETHENE	MG/KG	<0.05	<0.25	<0.25
TOLUENE	MG/KG	<0.1	<0.5	<0.5
1,1,1-TRICHLOROETHANE	MG/KG	0.1	<0.25	<0.25
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.25	<0.25
TRICHLOROETHENE	MG/KG	<0.05	<0.25	<0.25
VINYL ACETATE	MG/KG	<0.5	<2.5	<2.5
VINYL CHLORIDE	MG/KG	<0.05	<0.25	<0.25
XYLENES (TOTAL)	MG/KG	<0.05	<0.25	<0.25
EPB	§	82	108	91
1,2-DICHLOROETHANE-D4	§	79	104	87
TOLUENE-d8	§	79	104	86

MCK0003733



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: 8240

Matrix: SOIL

ATI I.D.: 101280

Sample Parameters	Units	Results
19 NONE DETECTED		N/A
20 NONE DETECTED		N/A
21 NONE DETECTED		N/A

MCK0003734

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240
 Blank I.D. : 10204
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 101280
 Date Extracted: 26-JAN-91
 Date Analyzed : 31-JAN-91
 Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	MG/KG	<1
BENZENE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
BROMOMETHANE	MG/KG	<0.5
2-BUTANONE (MEK)	MG/KG	<1
CARBON DISULFIDE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
CHLOROBENZENE	MG/KG	<0.05
CHLOROETHANE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
CHLOROMETHANE	MG/KG	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROETHENE	MG/KG	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
STYRENE	MG/KG	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	<0.05
TOLUENE	MG/KG	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
BFB	%	105
1,2-DICHLOROETHANE-D4	%	106
TOLUENE	%	102

MCK0003735



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240
Blank I.D. : 10204
Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 101280
Date Extracted: 26-JAN-91
Date Analyzed : 31-JAN-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0003736

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240
 Blank I.D. : 10209
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 101280
 Date Extracted: 28-JAN-91
 Date Analyzed : 01-FEB-91
 Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	MG/KG	<1
BENZENE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
BROMOMETHANE	MG/KG	<0.5
2-BUTANONE (MEK)	MG/KG	<1
CARBON DISULFIDE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
CHLORO BENZENE	MG/KG	<0.05
CHLOROETHANE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
CHLOROMETHANE	MG/KG	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
STYRENE	MG/KG	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	<0.05
TOLUENE	MG/KG	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
BFB	%	104
1,2-DICHLOROETHANE-D4	%	102
TOLUENE	%	102

MCK0003737



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

**REAGENT BLANK
(ADDITIONAL COMPOUNDS)**

Test : EPA 8240
Blank I.D. : 10209
Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 101280
Date Extracted: 28-JAN-91
Date Analyzed : 01-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0003738

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240
 MSMSD # : 10249
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 101280
 Date Extracted: 26-JAN-91
 Date Analyzed : 02-FEB-91
 Sample Matrix : SOIL
 REF I.D. : 101280-03

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	MG/KG	<0.05	2.8	2.8	100	2.7	96	4
CHLOROBENZENE	MG/KG	<0.05	2.8	2.7	96	27	96	0
1,1-DICHLOROETHENE	MG/KG	<0.05	2.4	2.0	83	1.9	79	5
TOLUENE	MG/KG	0.1	2.8	2.8	96	27	93	3
TRICHLOROETHENE	MG/KG	0.1	2.5	2.3	88	2.3	88	0

$\% \text{ Recovery} = (\text{Spike Sample Result} - \text{Sample Result}) * 100 / \text{Spike Concentration}$

$\text{RPD (Relative Percent Difference)} = (\text{Sample Result} - \text{Duplicate Result}) * 100 / \text{Average Result}$

MCK0003739



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240
 MSMSD # : 10269
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 101280
 Date Extracted: 28-JAN-91
 Date Analyzed : 02-FEB-91
 Sample Matrix : SOIL
 REF I.D. : 101280-19

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	MG/KG	<2.5	2.8	2.4	86	2.3	82	5
CHLOROBENZENE	MG/KG	<2.5	2.8	2.5	89	2.4	86	3
1,1-DICHLOROETHENE	MG/KG	<2.5	2.4	1.6	67	1.4	58	14
TOLUENE	MG/KG	<0.5	2.8	25	89	2.4	86	3
TRICHLOROETHENE	MG/KG	<2.5	25	2.1	88	2.0	80	10

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240
 MSMSD # : 10347
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 101280
 Date Extracted: 31-JAN-91
 Date Analyzed : 05-FEB-91
 Sample Matrix : SOIL
 REF I.D. : 101339-07

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	MG/KG	<0.05	2.75	2.07	75	2.00	73	3
CHLOROBENZENE	MG/KG	<0.05	2.75	2.15	78	2.05	75	4
1,1-DICHLOROETHENE	MG/KG	0.2	2.40	1.46	52*	1.64	60	14
TOLUENE	MG/KG	0.4	2.75	2.31	69	2.37	72	4
TRICHLOROETHENE	MG/KG	0.5	2.50	2.36	68	2.28	65	4

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

* RESULT OUTSIDE OF LIMITS DUE TO SAMPLE MATRIX INTERFERENCE.

MCK0003741



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240
 Blank Spike #: 10052
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 101280
 Date Extracted: 26-JAN-91
 Date Analyzed : 06-FEB-91
 Sample Matrix : SOIL

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	MG/KG	<0.05	2.4	2.8	86
CHLOROBENZENE	MG/KG	<0.05	2.5	2.8	90
1,1-DICHLOROETHENE	MG/KG	<0.05	1.7	2.4	71
TOLUENE	MG/KG	<0.1	2.4	2.8	89
TRICHLOROETHENE	MG/KG	<0.05	2.4	2.5	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003742



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240
Blank Spike #: 10057
Client : HARDING LAWSON
Project #: 17333,163.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 101280
Date Extracted: 28-JAN-91
Date Analyzed : 06-FEB-91
Sample Matrix : SOIL

Table with 6 columns: Parameters, Units, Blank Result, Spiked Sample, Spike Conc., % Rec. Rows include BENZENE, CHLORO BENZENE, 1,1-DICHLOROETHENE, TOLUENE, and TRICHLOROETHENE.

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

1012

SP 3 of 5
ATI

Harding Lawson Associates
15821 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 - 213/617-7232
Telecopy 714/259-1376

CHAIN OF CUSTODY FORM

Samplers: Don Johnson

Job Number: 17333-163.11

Name/Location: McKesson Santa Fe Springs

Project Manager: B. Chadwick

Recorder: Boston

ANALYSIS REQUESTED	
EPA 601/8010	
EPA 602/8020	X
EPA 625/8270	X
ICP METALS	
EPA 8015M/TPH	

STATION DESCRIPTION/ NOTES
MX-SB-39 9.5-10.0
MX-SB-40 5.0-5.5
MX-SB-40 9.5-10.0
MX-SB-41 9.5-10.0
MX-SB-41 4.5-5.0
MX-SB-42 9.5-10.0
MX-SB-42 5.0-5.5

SOURCE CODE	MATRIX	#CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			
			Yr	Wk	Seq	Yr	Mo	Dy	Time
50	Water					91	01	25	

LAB NUMBER				MISCELLANEOUS				CHAIN OF CUSTODY RECORD					
Yr	Wk	Seq	OA CODE	DEPTH IN FEET	COL MTD CD	RECEIVED BY: (Signature)	DATE/TIME						
						<u>Boston</u>	<u>1/25/91</u>	<u>Bob DeLo</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>
						<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>
						<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>
						<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>
						<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>
						<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>
						<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>	<u>Boston</u>	<u>1/25/91</u>
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Analytical**Technologies**, Inc.

Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 101331

January 13, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: MCKESSON SANTA FE SPRINGS

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
January 30, 1991	7	SOIL

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.


J. FITZPATRICK
IOR PROJECT MANAGER


RICHARD M. AMANO
LABORATORY MANAGER

MCK0003747

SAMPLE CROSS REFERENCE

 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON SANTA FE SPRINGS

 Report Date: February 13, 199
 ATI I.D. : 101339

ATI #	Client Description	Matrix	Date Collected
1	MK-SB-17A SB2A	SOIL	29-JAN-91
2	MK-SB-17B SB2B	SOIL	29-JAN-91
3	MK-SB-23A SB1A	SOIL	29-JAN-91
4	MK-SB-23B SB1B	SOIL	29-JAN-91
5	MK-SB-17A 41	SOIL	25-JAN-91
6	MK-SB-39 5-5.5	SOIL	25-JAN-91
7	MK-SB-23A 30.5-31	SOIL	25-JAN-91
8	MK-SB-17 COMPOSITE (01,02)	SOIL	29-JAN-91
9	MK-SB-23 COMPOSITE (03,04)	SOIL	29-JAN-91

---TOTALS---

Matrix
Samples

SOIL

9

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 1013

Analysis

Technique/Description

EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

GC/MASS SPECTROMETER

MCK0003749



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240

Matrix: SOIL

ATI I.D.: 101339

Sample Parameters	Units	Results
5 NONE DETECTED		N/A
6 NONE DETECTED		N/A
7 247 ALIPHATIC HYDROCARBON	MG/KG	0.7

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

est : EPA 8240

client : HARDING LAWSON

Project #: 17333,163.11

ATI I.D. : 101339

Project Name: McKESSON SANTA SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
8	MK-SB-17 COMPOSITE (01,02)	SOIL	31-JAN-91	29-JAN-91	06-FEB-91	1.00
9	MK-SB-23 COMPOSITE (03,04)	SOIL	31-JAN-91	29-JAN-91	06-FEB-91	1.00

Parameter	Units	8	9
ACETONE	MG/KG	<1	<1
BENZENE	MG/KG	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05
CHLOROBENZENE	MG/KG	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05	<0.05
IS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	<0.05	<0.05
TOLUENE	MG/KG	<0.1	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05
TRICHLOROETHENE	MG/KG	<0.05	<0.05
VINYL ACETATE	MG/KG	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	<0.05	<0.05
BFB	%	89	92
1,2-DICHLOROETHANE-D4	%	77	78
TOLUENE-D8	%	90	92

MCK0003752



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240

Matrix: SOIL

ATI I.D.: 101339

Sample Parameters	Units	Results
8 NONE DETECTED		N/A
9 NONE DETECTED		N/A

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240
 Blank I.D. : 10246
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 101339
 Date Extracted: 31-JAN-91
 Date Analyzed : 04-FEB-91
 Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	MG/KG	<1
BENZENE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
BROMOMETHANE	MG/KG	<0.5
2-BUTANONE (MEK)	MG/KG	<1
CARBON DISULFIDE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
CHLOROBENZENE	MG/KG	<0.05
CHLOROETHANE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
CHLOROMETHANE	MG/KG	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
METHYLENE CHLORIDE	MG/KG	0.4
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
STYRENE	MG/KG	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	<0.05
TOLUENE	MG/KG	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
BFB	%	100
1,2-DICHLOROETHANE-D4	%	91
TOLUENE-D8	%	99

MCK0003754



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240
MSMSD # : 10347
Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 101339
Date Extracted: 31-JAN-91
Date Analyzed : 05-FEB-91
Sample Matrix : SOIL
REF I.D. : 101339-07

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPI. Rows include BENZENE, CHLORO BENZENE, 1,1-DICHLOROETHENE, TOLUENE, and TRICHLOROETHENE.

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

* RESULT OUTSIDE OF LIMITS DUE TO SAMPLE MATRIX INTERFERENCE.

MCK0003755



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240
Blank Spike #: 10099
Client : HARDING LAWSON
Project #: 17333,163.11
Project Name : MCKESSON SANTA FE SPRINGS

ATI I.D. : 101339
Date Extracted: 31-JAN-91
Date Analyzed : 06-FEB-91
Sample Matrix : SOIL

Table with 6 columns: Parameters, Units, Blank Result, Spiked Sample, Spike Conc., % Rec. Rows include BENZENE, CHLORO BENZENE, 1,1-DICHLOROETHENE, TOLUENE, and TRICHLOROETHENE.

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003756

CHAIN OF CUSTODY FORM

Lab: **ATI**

Job Number: **17333 163**
 Name/Location: **McKesson Santa Teppings**
 Project Manager: **B. Chedwick**
 Samplers: **Don Johnson / Barton Chedwick / Tom Harder**
 Recorder: **Don Johnson**

SOURCE CODE	MATRIX			# CONTAINERS & PRESERV.		SAMPLE NUMBER OR LAB NUMBER				DATE			STATION DESCRIPTION/NOTES	ANALYSIS REQUESTED	
	Water	Sediment	Soil	Oil	Unpres.	H ₂ SO ₄	HNO ₃	Yr	Wk	Seq	Yr	Mo			Dy
50	X	X	X	X	X	X	X	91	01	25	91	01	25	MK-SB-17A 41	EPA 601/8010 EPA 602/8020 EPA 624/8240 EPA 625/8270 ICP METALS EPA 8015M/TPH
50	X	X	X	X	X	X	X	91	01	25	91	01	25	MK-SB-39 5-5.5	X X X X
50	X	X	X	X	X	X	X	91	01	27	91	01	27	MK-SB-23A 30-31	X X X X

LAB NUMBER	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS	CHAIN OF CUSTODY RECORD	
					RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
					RELINQUISHED BY: (Signature) <i>Don Johnson</i>	RECEIVED BY: (Signature) <i>James Kelly</i>
					RELINQUISHED BY: (Signature) <i>James Kelly</i>	RECEIVED BY: (Signature) <i>Michael League</i>
					RELINQUISHED BY: (Signature) <i>Michael League</i>	RECEIVED BY: (Signature) <i>Michael League</i>
					RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)
					DISPATCHED BY: (Signature)	RECEIVED FOR LAB BY: (Signature)

DATE/TIME: 1/30/91 15:40
 DATE/TIME: 1/30/91 16:40
 DATE/TIME: 1/31/91
 DATE/TIME: 1/31/91

METHOD OF SHIPMENT: **Customer's custody seal on cooler**

MCK0003758



Analytical Technologies, Inc.

Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 102043

February 18, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: MCKESSON SANTA FE SPRINGS

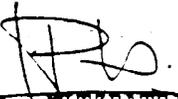
Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
February 04, 1991	1	SOIL

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.


J. FITZPATRICK
PROJECT MANAGER


for: RICHARD M. AMANO
LABORATORY MANAGER

MCK0003759



SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON SANTA FE SPRINGS

Report Date: February 18, 1991
ATI I.D. : 102043

Table with 3 columns: ATI #, Client Description, Matrix, Date Collected. Row 1: 1, MK-SB-23A 128.8'-129.2', SOIL, 04-FEB-91

---TOTALS---

Summary table with 2 columns: Matrix, # Samples. Row 1: SOIL, 1

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D.: 102043

Analysis

Technique/Description

EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

GC/MASS SPECTROMETER

MCK0003761



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240
 Client : HARDING LAWSON
 Project #: 17333,163.11

ATI I.D. : 102043
 Project Name: MCKESSON SANTA FE
 SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
1	MK-SB-23A 128.8'-129.2'	SOIL	05-FEB-91	04-FEB-91	08-FEB-91	1.00
Parameter	Units	1				
ACETONE	MG/KG	<1				
BENZENE	MG/KG	<0.05				
BROMODICHLOROMETHANE	MG/KG	<0.05				
BROMOFORM	MG/KG	<0.3				
BROMOMETHANE	MG/KG	<0.5				
2-BUTANONE (MEK)	MG/KG	<1				
CARBON DISULFIDE	MG/KG	<0.05				
CARBON TETRACHLORIDE	MG/KG	<0.05				
CHLOROBENZENE	MG/KG	<0.05				
CHLOROETHANE	MG/KG	<0.05				
CHLOROFORM	MG/KG	<0.05				
CHLOROMETHANE	MG/KG	<0.5				
DIBROMOCHLOROMETHANE	MG/KG	<0.05				
1,1-DICHLOROETHANE	MG/KG	<0.05				
1,2-DICHLOROETHANE	MG/KG	<0.05				
1,1-DICHLOROETHENE	MG/KG	<0.05				
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05				
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05				
1,2-DICHLOROPROPANE	MG/KG	<0.05				
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05				
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05				
ETHYLBENZENE	MG/KG	<0.05				
2-HEXANONE (MBK)	MG/KG	<0.5				
METHYLENE CHLORIDE	MG/KG	<0.3				
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5				
STYRENE	MG/KG	<0.05				
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05				
TETRACHLOROETHENE	MG/KG	<0.05				
TOLUENE	MG/KG	<0.1				
1,1,1-TRICHLOROETHANE	MG/KG	<0.05				
1,1,2-TRICHLOROETHANE	MG/KG	<0.05				
TRICHLOROETHENE	MG/KG	<0.05				
VINYL ACETATE	MG/KG	<0.5				
VINYL CHLORIDE	MG/KG	<0.05				
XYLENES (TOTAL)	MG/KG	<0.05				
BFB	%	87				
1,2-DICHLOROETHANE-D4	%	81				
TOLUENE-D8	%	82				

MCK0003762



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240

Matrix: SOIL

ATI I.D.: 102043

Sample Parameters

Units

Results

1 NONE DETECTED

N/A

MCK0003763



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240
 Blank I.D. : 10288
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 102043
 Date Extracted: 05-FEB-91
 Date Analyzed : 08-FEB-91
 Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	MG/KG	<1
BENZENE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
BROMOMETHANE	MG/KG	<0.5
2-BUTANONE (MEK)	MG/KG	<1
CARBON DISULFIDE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
CHLOROBENZENE	MG/KG	<0.05
CHLOROETHANE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
CHLOROMETHANE	MG/KG	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
METHYLENE CHLORIDE	MG/KG	0.37
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
STYRENE	MG/KG	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	<0.05
TOLUENE	MG/KG	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
BFB	§	97
1,2-DICHLOROETHANE-D4	§	100
TOLUENE-D8	§	94



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240
Blank I.D. : 10288
Client : HARDING LAWSON
Project # : 17333,163.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102043
Date Extracted: 05-FEB-91
Date Analyzed : 08-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0003765



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240
 MSMSD # : 10411
 Client : HARDING LAWSON
 Project # : 17333,163.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 102043
 Date Extracted: 02-FEB-91
 Date Analyzed : 08-FEB-91
 Sample Matrix : SOIL
 REF I.D. : 102016-02

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	MG/KG	<0.05	2.8	2.2	79	2.2	79	0
CHLOROBENZENE	MG/KG	<0.05	2.8	2.1	75	2.1	75	0
1,1-DICHLOROETHENE	MG/KG	<0.05	2.4	1.8	75	1.5	63	18
TOLUENE	MG/KG	<0.1	2.8	2.2	79	2.2	79	0
TRICHLOROETHENE	MG/KG	<0.05	2.5	2.1	84	2.0	80	5

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
 RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003766



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240
 Blank Spike #: 10158
 Client : HARDING LAWSON
 Project #: 17333,163.11
 Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102043
 Date Extracted: 05-FEB-91
 Date Analyzed : 05-FEB-91
 Sample Matrix : SOIL

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	MG/KG	<0.05	2.5	2.8	88
CHLOROBENZENE	MG/KG	<0.05	2.5	2.8	89
1,1-DICHLOROETHENE	MG/KG	<0.05	1.9	2.4	79
TOLUENE	MG/KG	<0.1	2.5	2.8	89
TRICHLOROETHENE	MG/KG	<0.05	2.4	2.5	95

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result



ATI I.D.: 1021

February 25, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: MCKESSON SANTA FE SPRINGS
Project # : 17333,164.11

Attention: BURTON CHADWICK

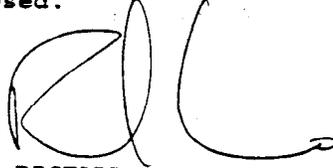
Analytical Technologies, Inc. has received the following sample(s):

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
February 07, 1991	5	SOIL

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.


TIM J. FITZPATRICK
SENIOR PROJECT MANAGER


RICHARD M. AMANO
LABORATORY MANAGER

MCK0003769



SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
Project # : 17333,164.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: February 25, 199
ATI I.D. : 102107

Table with 4 columns: ATI #, Client Description, Matrix, Date Collected. Contains 7 rows of sample data.

---TOTALS---

Summary table with 2 columns: Matrix, # Samples. Shows SOIL with 7 samples.

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0003770

ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,164.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 1021

Analysis-----
Technique/Description

EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)
MOD EPA 418.1 (PETROLEUM HYDROCARBONS)

GC/MASS SPECTROMETER
GC/MASS SPECTROMETER
INFRARED SPECTROMETER

MCK0003771



GENERAL CHEMISTRY RESULTS

Client : HARDING LAWSON
Project # : 17333,164.11
Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D.: 1021

Sample Client ID #	Matrix	Date Sampled	Date Receive
6	COMPOSITE MK-SB-23A (01-03)	07-FEB-91	07-FEB-
7	COMPOSITE MK-SB-17A (04,05)	07-FEB-91	07-FEB-

Parameter	Units	6	7
PETROLEUM HYDROCARBONS	MG/KG	4	11

MCK0003772

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

 Client : HARDING LAWSON
 Project # : 17333,164.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 1021

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
PETROLEUM HYDROCARBONS	102116-13	MG/KG	2	2	0	139	127	100

$$\% \text{ Recovery} = (\text{Spike Sample Result} - \text{Sample Result}) * 100 / \text{Spike Concentration}$$

$$\text{RPD (Relative Percent Difference)} = (\text{Sample Result} - \text{Duplicate Result}) * 100 / \text{Average Result}$$

MCK0003773



GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,164.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 1021

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
PETROLEUM HYDROCARBONS	10278	MG/KG	<1	125	136	109

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003774

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Client : HARDING LAWSON

ATI I.D. : 102107

Project # : 17333,164.11

Project Name: MCKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
6	COMPOSITE MK-SB-23A (01-03)	SOIL	09-FEB-91	07-FEB-91	13-FEB-91	1.00
7	COMPOSITE MK-SB-17A (04,05)	SOIL	09-FEB-91	07-FEB-91	13-FEB-91	1.00

Parameter	Units	6	7
ACETONE	MG/KG	<1	<1
BENZENE	MG/KG	<0.05	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05	<0.05
BROMOFORM	MG/KG	<0.3	<0.3
BROMOMETHANE	MG/KG	<0.5	<0.5
2-BUTANONE (MEK)	MG/KG	<1	<1
CARBON DISULFIDE	MG/KG	<0.05	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05	<0.05
CHLOROBENZENE	MG/KG	<0.05	<0.05
CHLOROETHANE	MG/KG	<0.05	<0.05
CHLOROFORM	MG/KG	<0.05	<0.05
CHLOROMETHANE	MG/KG	<0.5	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05	<0.05
ETHYLBENZENE	MG/KG	<0.05	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5	<0.5
METHYLENE CHLORIDE	MG/KG	<0.3	<0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5	<0.5
STYRENE	MG/KG	<0.05	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05	<0.05
TETRACHLOROETHENE	MG/KG	<0.05	<0.05
TOLUENE	MG/KG	<0.1	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05	<0.05
TRICHLOROETHENE	MG/KG	<0.05	<0.05
VINYL ACETATE	MG/KG	<0.5	<0.5
VINYL CHLORIDE	MG/KG	<0.05	<0.05
XYLENES (TOTAL)	MG/KG	<0.05	<0.05
BFB	%	93	79
1,2-DICHLOROETHANE-D4	%	82	73
TOLUENE-D8	%	82	71



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: SOIL

ATI I.D.: 102107

Sample Parameters	Units	Results
6 NONE DETECTED		N/A
7 NONE DETECTED		N/A

MCK0003776

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240
 Blank I.D. : 10364
 Client : HARDING LAWSON
 Project # : 17333,164.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 102107
 Date Extracted: 09-FEB-91
 Date Analyzed : 12-FEB-91
 Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	MG/KG	<1
BENZENE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
BROMOMETHANE	MG/KG	<0.5
2-BUTANONE (MEK)	MG/KG	<1
CARBON DISULFIDE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
CHLORO BENZENE	MG/KG	<0.05
CHLOROETHANE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
CHLOROMETHANE	MG/KG	<0.5
DIBROMOCHLOROMETHANE	MG/KG	<0.05
1,1-DICHLOROETHANE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
1,1-DICHLOROETHENE	MG/KG	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
METHYLENE CHLORIDE	MG/KG	0.3
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
STYRENE	MG/KG	<0.05
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	<0.05
TOLUENE	MG/KG	<0.1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
BFB	%	98
1,2-DICHLOROETHANE-D4	%	95
TOLUENE-D8	%	104

MCK0003777

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240
Blank I.D. : 10364
Client : HARDING LAWSON
Project # : 17333,164.11
Project Name: McKESSON SANTA FE SPRINGS
ATI I.D. : 102107
Date Extracted: 09-FEB-91
Date Analyzed : 12-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0003778

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240
 MSMSD # : 10599
 Client : HARDING LAWSON
 Project # : 17333,164.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 102107
 Date Extracted: 09-FEB-91
 Date Analyzed : 12-FEB-91
 Sample Matrix : SOIL

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPI
BENZENE	MG/KG	<0.05	2.8	2.6	93	2.5	89	4
CHLOROBENZENE	MG/KG	<0.05	2.8	2.7	96	2.7	96	0
1,1-DICHLOROETHENE	MG/KG	<0.05	2.4	1.9	79	1.8	75	5
TOLUENE	MG/KG	<0.10	2.8	2.7	96	2.6	93	3
TRICHLOROETHENE	MG/KG	<0.05	2.5	2.6	104	2.3	92	12

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003779



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240
Blank Spike #: 10218
Client : HARDING LAWSON
Project #: 17333,164.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102107
Date Extracted: 09-FEB-91
Date Analyzed : 12-FEB-91
Sample Matrix : SOIL

Table with 6 columns: Parameters, Units, Blank Result, Spiked Sample, Spike Conc., % Rec. Rows include BENZENE, CHLORO BENZENE, 1,1-DICHLOROETHENE, TOLUENE, and TRICHLOROETHENE.

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

Client : HARDING LAWSON

ATI I.D. : 102107

Project # : 17333,164.11

Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
6	COMPOSITE MK-SB-23A (01-03)	SOIL	09-FEB-91	07-FEB-91	18-FEB-91	1.00
7	COMPOSITE MK-SB-17A (04,05)	SOIL	09-FEB-91	07-FEB-91	18-FEB-91	1.00

Parameter	Units	6	7
ACENAPHTHENE	MG/KG	<0.17	<0.17
ACENAPHTHYLENE	MG/KG	<0.17	<0.17
ANILINE	MG/KG	<0.17	<0.17
ANTHRACENE	MG/KG	<0.17	<0.17
BENZOIC ACID	MG/KG	<0.85	<0.85
BENZO(a)ANTHRACENE	MG/KG	<0.17	<0.17
BENZO(a)PYRENE	MG/KG	<0.17	<0.17
BENZO(b)FLUORANTHENE	MG/KG	<0.17	<0.17
BENZO(g,h,i)PERYLENE	MG/KG	<0.17	<0.17
BENZO(k)FLUORANTHENE	MG/KG	<0.17	<0.17
BENZYL ALCOHOL	MG/KG	<0.17	<0.17
BIS(2-CHLOROETHOXY)METHANE	MG/KG	<0.17	<0.17
BIS(2-CHLOROETHYL)ETHER	MG/KG	<0.17	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	MG/KG	<0.17	<0.17
BIS(2-ETHYLEHEXYL)PHTHALATE	MG/KG	<0.17	<0.17
p-TOLUENE-DIISOPROPYL-ETHER	MG/KG	<0.17	<0.17
BUTYLBENZYLPHTHALATE	MG/KG	<0.17	<0.17
4-CHLOROANILINE	MG/KG	<0.17	<0.17
4-CHLORO-3-METHYLPHENOL	MG/KG	<0.17	<0.17
2-CHLORONAPHTHALENE	MG/KG	<0.17	<0.17
2-CHLOROPHENOL	MG/KG	<0.17	<0.17
4-CHLOROPHENYL-PHENYLETHER	MG/KG	<0.17	<0.17
CHRYSENE	MG/KG	<0.17	<0.17
DIBENZ(a,b)ANTHRACENE	MG/KG	<0.17	<0.17
DIBENZOFURAN	MG/KG	<0.17	<0.17
1,2-DICHLOROBENZENE	MG/KG	<0.17	<0.17
1,3-DICHLOROBENZENE	MG/KG	<0.17	<0.17
1,4-DICHLOROBENZENE	MG/KG	<0.17	<0.17
3,3'-DICHLOROBENZIDINE	MG/KG	<0.34	<0.34
2,4-DICHLOROPHENOL	MG/KG	<0.17	<0.17
DIETHYLPHTHALATE	MG/KG	<0.17	<0.17
2,4-DIMETHYLPHENOL	MG/KG	<0.17	<0.17
DIMETHYLPHTHALATE	MG/KG	<0.17	<0.17
DI-N-BUTYLPHTHALATE	MG/KG	<0.17	<0.17
2-METHYL-4,6-DINITROPHENOL	MG/KG	<0.85	<0.85
2,4-DINITROPHENOL	MG/KG	<0.85	<0.85
2,4-DINITROTOLUENE	MG/KG	<0.17	<0.17
2,6-DINITROTOLUENE	MG/KG	<0.17	<0.17

MCK0003781



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)
 Client : HARDING LAWSON ATI I.D. : 102107
 Project # : 17333,164.11
 Project Name: MCKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
6	COMPOSITE MK-SB-23A (01-03)	SOIL	09-FEB-91	07-FEB-91	13-FEB-91	1.00
7	COMPOSITE MK-SB-17A (04,05)	SOIL	09-FEB-91	07-FEB-91	18-FEB-91	1.00

Parameter	Units	6	7
DI-N-OCTYLPHTHALATE	MG/KG	<0.17	<0.17
FLUORANTHENE	MG/KG	<0.17	<0.17
FLUORENE	MG/KG	<0.17	<0.17
HEXACHLOROBENZENE	MG/KG	<0.17	<0.17
HEXACHLOROBUTADIENE	MG/KG	<0.17	<0.17
HEXACHLOROCYCLOPENTADIENE	MG/KG	<0.17	<0.17
HEXACHLOROETHANE	MG/KG	<0.17	<0.17
INDENO(1,2,3-cd)PYRENE	MG/KG	<0.17	<0.17
ISOPHORONE	MG/KG	<0.17	<0.17
2-METHYLNAPHTHALENE	MG/KG	<0.17	<0.17
2-METHYLPHENOL	MG/KG	<0.17	<0.17
4-METHYLPHENOL	MG/KG	<0.17	<0.17
NAPHTHALENE	MG/KG	<0.17	<0.17
2-NITROANILINE	MG/KG	<0.85	<0.85
3-NITROANILINE	MG/KG	<0.85	<0.85
4-NITROANILINE	MG/KG	<0.85	<0.85
NITROBENZENE	MG/KG	<0.17	<0.17
2-NITROPHENOL	MG/KG	<0.17	<0.17
4-NITROPHENOL	MG/KG	<0.85	<0.85
N-NITROSODIMETHYLAMINE	MG/KG	<0.17	<0.17
N-NITROSO-DI-N-PROPYLAMINE	MG/KG	<0.17	<0.17
N-NITROSODIPHENYLAMINE	MG/KG	<0.17	<0.17
PENTACHLOROPHENOL	MG/KG	<0.85	<0.85
PHENOL	MG/KG	<0.17	<0.17
PHENANTHRENE	MG/KG	<0.17	<0.17
PYRENE	MG/KG	<0.17	<0.17
PYRIDINE	MG/KG	<0.85	<0.85
1,2,4-TRICHLOROBENZENE	MG/KG	<0.17	<0.17
2,4,5-TRICHLOROPHENOL	MG/KG	<0.85	<0.85
2,4,6-TRICHLOROPHENOL	MG/KG	<0.17	<0.17
NITROBENZENE-D5	‰	58	52
2-FLUOROBIPHENYL	‰	59	55
TERPHENYL-D14	‰	71	63
PHENOL-D6	‰	59	52
2-FLUOROPHENOL	‰	51	48
2,4,6-TRIBROMOPHENOL	‰	63	62



Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

Matrix: SOIL

ATI I.D.: 102107

Sample Parameters	Units	Results
6 NONE DETECTED		N/A
7 NONE DETECTED		N/A

MCK0003783



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8270
 Blank I.D. : 10417
 Client : HARDING LAWSON
 Project # : 17333,164.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 102107
 Date Extracted: 09-FEB-91
 Date Analyzed : 18-FEB-91
 Dil. Factor : 1.00

Parameters	Units	Results
ACENAPHTHENE	MG/KG	<0.17
ACENAPHTHYLENE	MG/KG	<0.17
ANILINE	MG/KG	<0.17
ANTHRACENE	MG/KG	<0.17
BENZOIC ACID	MG/KG	<0.85
BENZO(a)ANTHRACENE	MG/KG	<0.17
BENZO(a)PYRENE	MG/KG	<0.17
BENZO(b)FLUORANTHENE	MG/KG	<0.17
BENZO(g,h,i)PERYLENE	MG/KG	<0.17
BENZO(k)FLUORANTHENE	MG/KG	<0.17
BENZYL ALCOHOL	MG/KG	<0.17
BIS(2-CHLOROETHOXY)METHANE	MG/KG	<0.17
BIS(2-CHLOROETHYL)ETHER	MG/KG	<0.17
BIS(2-CHLOROISOPROPYL)ETHER	MG/KG	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	MG/KG	<0.17
4-BROMOPHENYL-PHENYLETHER	MG/KG	<0.17
BUTYLBENZYLPHthalATE	MG/KG	<0.17
4-CHLOROANILINE	MG/KG	<0.17
4-CHLORO-3-METHYLPHENOL	MG/KG	<0.17
2-CHLORONAPHTHALENE	MG/KG	<0.17
2-CHLOROPHENOL	MG/KG	<0.17
4-CHLOROPHENYL-PHENYLETHER	MG/KG	<0.17
CHRYSENE	MG/KG	<0.17
DIBENZ(a,h)ANTHRACENE	MG/KG	<0.17
DIBENZOFURAN	MG/KG	<0.17
1,2-DICHLOROBENZENE	MG/KG	<0.17
1,3-DICHLOROBENZENE	MG/KG	<0.17
1,4-DICHLOROBENZENE	MG/KG	<0.17
3,3'-DICHLOROBENZIDINE	MG/KG	<0.34
2,4-DICHLOROPHENOL	MG/KG	<0.17
DIETHYLPHthalATE	MG/KG	<0.17
2,4-DIMETHYLPHENOL	MG/KG	<0.17
DIMETHYLPHthalATE	MG/KG	<0.17
DI-N-BUTYLPHthalATE	MG/KG	<0.17
2-METHYL-4,6-DINITROPHENOL	MG/KG	<0.85
2,4-DINITROPHENOL	MG/KG	<0.85
2,4-DINITROTOLUENE	MG/KG	<0.17
2,6-DINITROTOLUENE	MG/KG	<0.17
DI-N-OCTYLPHthalATE	MG/KG	<0.17
FLUORANTHENE	MG/KG	<0.17
FLUORENE	MG/KG	<0.17
HEXACHLOROBENZENE	MG/KG	<0.17
HEXACHLOROBUTADIENE	MG/KG	<0.17
HEXACHLOROCYCLOPENTADIENE	MG/KG	<0.17
HEXACHLOROETHANE	MG/KG	<0.17
INDENO(1,2,3-cd)PYRENE	MG/KG	<0.17

MCK0003784



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8270
 Blank I.D. : 10417
 Client : HARDING LAWSON
 Project # : 17333,164.11
 Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102107
 Date Extracted: 09-FEB-91
 Date Analyzed : 18-FEB-91
 Dil. Factor : 1.00

Parameters	Units	Results
ISOPHORONE	MG/KG	<0.17
2-METHYLNAPHTHALENE	MG/KG	<0.17
2-METHYLPHENOL	MG/KG	<0.17
4-METHYLPHENOL	MG/KG	<0.17
NAPHTHALENE	MG/KG	<0.17
2-NITROANILINE	MG/KG	<0.85
3-NITROANILINE	MG/KG	<0.85
4-NITROANILINE	MG/KG	<0.85
NITROBENZENE	MG/KG	<0.17
2-NITROPHENOL	MG/KG	<0.17
4-NITROPHENOL	MG/KG	<0.85
N-NITROSODIMETHYLAMINE	MG/KG	<0.17
N-NITROSO-DI-N-PROPYLAMINE	MG/KG	<0.17
N-NITROSODIPHENYLAMINE	MG/KG	<0.17
PENTACHLOROPHENOL	MG/KG	<0.85
PHENOL	MG/KG	<0.17
PHENANTHRENE	MG/KG	<0.17
YRENE	MG/KG	<0.17
YRIDINE	MG/KG	<0.85
1,2,4-TRICHLOROBENZENE	MG/KG	<0.17
2,4,5-TRICHLOROPHENOL	MG/KG	<0.85
2,4,6-TRICHLOROPHENOL	MG/KG	<0.17
NITROBENZENE-D5	‰	59
2-FLUOROBIPHENYL	‰	57
TERPHENYL-D14	‰	76
PHENOL-D6	‰	58
2-FLUOROPHENOL	‰	52
2,4,6-TRIBROMOPHENOL	‰	66

MCK0003785



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8270
Blank I.D. : 10417
Client : HARDING LAWSON
Project # : 17333,164.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102107
Date Extracted: 09-FEB-91
Date Analyzed : 18-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
2379 ALIPHATIC HYDROCARBON	MG/KG	3
2429 ALIPHATIC HYDROCARBON	MG/KG	7
2474 ALIPHATIC HYDROCARBON	MG/KG	8

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8270
 MSMSD # : 10658
 Client : HARDING LAWSON
 Project # : 17333,164.11
 Project Name: MCKESSON SANTA FE SPRINGS

ATI I.D. : 102107
 Date Extracted: 09-FEB-91
 Date Analyzed : 18-FEB-91
 Sample Matrix : SOIL
 REF I.D. : 102107-06

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPI
ACENAPHTHENE	MG/KG	<0.17	3.3	1.5	45	1.6	48	6
4-CHLORO-3-METHYLPHENOL	MG/KG	<0.17	6.6	3.6	55	3.7	56	2
2-CHLOROPHENOL	MG/KG	<0.17	6.6	3.1	47	3.3	50	6
1,4-DICHLOROBENZENE	MG/KG	<0.17	3.3	1.7	52	1.8	55	6
2,4-DINITROTOLUENE	MG/KG	<0.17	3.3	1.9	58	1.9	58	0
4-NITROPHENOL	MG/KG	<0.85	13.2	7.4	56	8.7	66	16
N-NITROSO-DI-N-PROPYLAMINE	MG/KG	<0.17	3.3	1.9	58	2.0	61	5
PENTACHLOROPHENOL	MG/KG	<0.85	13.2	6.4	48	6.9	52	8
PHENOL	MG/KG	<0.17	6.6	3.0	45	3.1	47	4
PYRENE	MG/KG	<0.17	3.3	2.1	64	2.2	67	5
1,2,4-TRICHLOROBENZENE	MG/KG	<0.17	3.3	1.8	55	2.0	61	10

$\% \text{ Recovery} = (\text{Spike Sample Result} - \text{Sample Result}) * 100 / \text{Spike Concentration}$

$\text{RPD (Relative Percent Difference)} = (\text{Sample Result} - \text{Duplicate Result}) * 100 / \text{Average Result}$

MCK0003787

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8270
 Blank Spike #: 10252
 Client : HARDING LAWSON
 Project # : 17333,164.11
 Project Name : MCKESSON SANTA FE SPRINGS

ATI I.D. : 102107
 Date Extracted: 09-FEB-91
 Date Analyzed : 18-FEB-91
 Sample Matrix : SOIL

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
ACENAPHTHENE	MG/KG	<0.17	3.3	0.17	52
4-CHLORO-3-METHYLPHENOL	MG/KG	<0.17	6.6	3.8	58
2-CHLOROPHENOL	MG/KG	<0.17	6.6	3.4	52
1,4-DICHLOROBENZENE	MG/KG	<0.17	3.3	1.9	58
2,4-DINITROTOLUENE	MG/KG	<0.17	3.3	1.9	58
4-NITROPHENOL	MG/KG	<0.85	13.2	8.9	67
N-NITROSO-DI-N-PROPYLAMINE	MG/KG	<0.17	3.3	2.1	64
PENTACHLOROPHENOL	MG/KG	<0.85	13.2	7.7	58
PHENOL	MG/KG	<0.17	6.6	3.3	50
PYRENE	MG/KG	<0.17	3.3	2.2	68
1,2,4-TRICHLOROBENZENE	MG/KG	<0.17	3.3	2.0	61

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0003788



Lawson Associates
 15621 Redhill Avenue, Suite 100
 Tustin, California 92680
 714/259-7992 - 213/617-7232
 Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

102107

Lab:

Samplers: Don Johnson

Job Number: 17333, 164, 11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Burtan Schwednick

Recorder: [Signature]

(Signature Required)

ANALYSIS REQUESTED									
EPA 601/8010									
EPA 602/8020									
EPA 624/8240									
EPA 625/8270									
ICP METALS									
EPA 8015M/TPH									

STATION DESCRIPTION/ NOTES
MX-50-23A 502 BK
MX-50-23A 503A 503A
MX-50-23A 503B
MX-50-17A 503A
MX-50-17A 503B

SOURCE CODE	MATRIX			#CONTAINERS & PRESERV.	SAMPLE NUMBER OR LAB NUMBER			DATE			
	Water	Sediment	Soil		Yr	Wk	Seq	Yr	Mo	DY	Time
48	X			X				91	02	07	
48	X			X				91	02	07	
48	X			X				91	02	07	
48	X			X				91	02	07	
48	X			X				91	02	07	

LAB NUMBER		DEPTH IN FEET		COL MTD CD		OA CODE		MISCELLANEOUS		CHAIN OF CUSTODY RECORD	
Yr	Wk	Seq								RELINQUISHED BY: (Signature)	DATE/TIME
								For Composite Samples		[Signature]	9-11-11
								MX-50-23A & MX-50-23A Tag 1/2		[Signature]	9-11-11
								Composite samples MX-50-17A		[Signature]	9-11-11
								MX-50-17B Tag 1/2		[Signature]	9-11-11
								Standard turnaround time!		[Signature]	9-11-11
										RECEIVED BY: (Signature)	DATE/TIME
										RECEIVED BY: (Signature)	DATE/TIME
										RECEIVED BY: (Signature)	DATE/TIME
										RECEIVED BY: (Signature)	DATE/TIME
										RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT											

MCK0003789

DISTRIBUTION

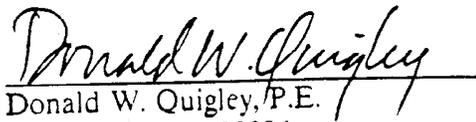
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Attention: Ms. Jean Mescher

1 copy: Latham & Watkins
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Attention: Mr. Bruce Howard

3 copies: Department of Toxic Substances Control
1405 North San Fernando Boulevard, No. 300
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Attention: Mr. Douglas Suzuki

1 copy: City of Santa Fe Springs
11710 Telegraph Road
Santa Fe Springs, California 90670-3658
Attention: Mr. Andrew C. Lazzaretto

QUALITY CONTROL REVIEWER:


Donald W. Quigley, P.E.
Civil Engineer - 22026

TH/TAK/BS/DWQ/lf

MCK0003790